THE BUILDER

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THE NEED FOR NEW BUILDING BY-LAWS

TO every capable architect and honest builder there comes a time when the building laws prove a nuisance —a necessary nuisance, perhaps, to prevent the dishonest or incapable from jeopardising the safety of the public, but nevertheless a nuisance. Obviously, when a perfectly sound job is being carried out, if the building laws interfere with it, there must be something wrong with the laws. What is to be done ?

Generally, the architect grumbles awhile, mentally determines that something really must be done about it, and then adopts the only course open at the time—compliance. The trouble past, he tries to forget the nuisance that a faulty by-law can prove itself, but the skeleton is merely shut up in his mental cupboard until some local authority or interfering district surveyor forces the door and lets the grisly thing out on him again.

It would not be unreasonable to inquire why the architect at some time when he is only intermittently busy—during the war period for instance—does not take the opportunity of redeeming his promise to himself by boldly withdrawing the skeleton from his cupboard, looking it squarely in the eye-sockets and "doing something about it." Perhaps the answer lies in the fact that building law is a complex subject comprising both "building" and "law," and that the architect generally has little taste for law, while similarly the average lawyer has little interest in building.

Whether that be so or not, the fact remains that it can be argued that, in the public interest, something really "should be done" to remove all such impediments to economical building in anticipation of the aftermath of the war.

An even more disturbing idea is the fact that any undue laxity in the building laws would militate against general economy in still greater measure than over-restriction. The doctrine of some legislative bodies is that lack of control is conducive to economy in construction. If "economy" and "cheapness" be regarded as synonymous terms, this is a truism, but defective building cannot be held to be truly economical except by the "jerry-builder." The architect, the engineer and the reputable builder, while paying due regard to costs, do not permit that consideration to outweigh efficiency. They see to it that, for example, the storey-post is sufficient to transmit the load of the superstructure whether the law require it or not. Their "skeleton" is the law which is unnecessarily restrictive.

And therein lies the ground for graver apprehension. Where a by-law is lax or non-existent there is not even the periodic grumble. The law which ordains that a body at rest remains at rest until put in motion by some force is not Newton's but Nature's, and is universal in its application to all bodies, including those whose function it is to make by-laws. Yet anyone who has served on an advisory committee on building by-laws or, in the terms of the London Building Act (1935), has "objected," will be fully aware that external pressure is not regarded by legislative authorities as in any way inimical; but, on the contrary, is relied upon, by reason of their constitution and procedure, to afford the motive force essential to their operation. As further evidence in consideration of the suggestion of unwarranted complacency sometimes attributed to the authorities, it is stated in the preliminary memorandum to the Ministry of Health Model By-laws, 1937 (with regard to the regret of the Advisory Committee at the lack of time to incorporate references to standard specification), that the Minister contemplated a fuller revision of the by-laws within three years of the passing of the Public Health Act, 1936. Similarly in the foreword to the London Building By-laws which came into effect in January, 1938, the L.C.C. said the by-laws would be reviewed at the expiration of three years, in the light of the experience gained in their working.

But, even though the war has prevented either of these steps being taken, would such revision have been sufficient to meet the demand for economy—true economy which comprises efficiency—that will undoubtedly be pressing themselves upon us ? And again, when the demand comes, shall we be ready to meet it, or must we then sit around a table and discuss by-laws, or resort, as before, to some hasty legislation, abrogating building laws and substituting chaos ?

The criticism will undoubtedly be raised that the year 1941 is no time to give attention to building by-laws, that the sole job of every active intelligence in the country is to get on with winning the war and never mind the winning of peace. Yet the Government has given a sufficient lead in this, by the appointment of Mr. Arthur Greenwood to the examination of the general problems of reconstruction and of Lord Reith to the particular oversight of the building and public works industries. It may be that neither of these Ministers would regard building by-laws as being within his province, but each has a clear call to do something about them, or at least to find out whether anything ought to be done.

Among the professional and technical men in the building industry, as well as scientists and others who for sufficient reason are debarred from military service, one of the outstanding complaints is that they cannot aid the national effort. Their skill is largely attuned to peace, and whilst there may not be room for them in the war machine, there is surely room for at least some of them in the tuning up of their own machine for the great post-war effort. Surely now is the time when they might be invited to drag the skeleton from out of the cupboard and hold an inquest upon it. At the same time they might attempt the incarnation of those spirits which persist in haunting some of us—the souls of building by-laws yet unborn! We hope that—beside the administrators of by-laws—the jury would include lawyers, architects, engineers, surveyors, builders, manufacturers of building materials, building owners and (last but by no means least) operatives—in fact, a panel capable of viewing the case from all points of view and returning a true verdict.

The Builder hopes that amongst those eligible to serve on that jury are some who will offer their considered opinions upon the subject, and with the object of stimulating discussion, is publishing a short series of articles by Mr. Alfred Barnes and Mr. Roland Woods—the first of which appeared in our last issue.

It is proverbial that there are two sides to every argument. These articles are intentionally provocative and, though not exhaustive nor in any sense *ex machina*, they are meant to present one side of the question in its strongest light. If by this means they succeed in no other way than in promoting discussion and action at a time when discussion and action are obviously called for, they will have served their purpose.

NOTES AND NEWS

Deferment of Military Service of Architects.

The R.I.B.A. state: The Ministry of Works and Buildings have drawn attention to a further point in the procedure which is necessary when applications for deferment of military service or release from the Armed Forces are made in respect of architectural assistants. Before making such application the architects or firms concerned should apply to the Central Register Department of the Ministry of Labour and National Service for a suitable substitute. Should they be unable to obtain a suitable substitute they should note down in Section 3 of Form N.S.100 that they have applied to the Central Register without avail. Form N.S.100 should then be sent on to the professional institution of which the employer is a member.

L.C.C. Architect's Department: New Post.

The Civil Defence and General Purposes Committee of the London County Council have recommended to the Council that the vacant position of deputy architect should not be filled for the duration of the war. "The architect's department is in effect a large business organisation," the Committee stated, "and this is more apparent even in war than in peace, with the problems of the rescue service and the debris-disposal service added. The greater the extent to which the trained administrator can be brought in to aid the professional expert the better; in this way the professional man, while retaining the direction and control of the department, can avoid becoming immersed in questions of organisation and administrative detail and devote himself to the important and essential questions of planning, of design and construction, and the critical examination of building proposals."

The Committee accordingly propose that there should be a separate position, designated "administrative officer," and that the scale of salary should be the same as for the divisional architects, £1,200, rising to £1,500 a year.

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A.A. Exhibition of Asplund's Work.

Photographs of the work of the late Professor Asplund are now on view at 36, Bedford-square, the Architectural Association's premises. Works on exhibition by this Swedish architect who died last year include Scandia Theatre, Stockholm; Stockholm Public Library; the Stockholm Exhibition, of which he was supervising architect, and of which he designed the Paradiset Restaurant; the Brandenburg Department Store; extension to the Gothenberg Town Hall; and his last work, the Stockholm Crematorium.

These are important works, but it is interesting to look at the week-end cottage designed and carried out for his own use. Its charm is its simplicity; situated amidst a pleasant treed site, it in no way offends its setting, which is so often the case in this country. Of the more important work the Public Library, Stockholm, is outstanding, but this offers more architectural scope than a commercial building. The work generally is of a high standard, and is what might be termed sane modernism. The charming Paradiset Restaurant interior certainly possesses a decorative character and has the right spirit for an exhibition.

A DISCOVERY AT THE GUILDHALL.

The wall shown above is one of two unearthed below the Art Gallery at the Guildhall. Some details of this structure, which may be part of the Guildhall Chapel, are given on this page.

The Building Centre's New Home.

The Building Centre, which has had the misfortune of being bombed twice at its premises in New Bond-street, is now removed to the Polytechnic Extension, Little Titchfield-street, Great Portland-street, W.1. Although the new accommodation is much more limited than the old, the Centre is maintaining a concentrated exhibition of materials and equipment more particularly appertaining to war-time and post-war building. Most of the exhibitors are retaining their connection either by exhibits and literature or photographs and technical data. The Centre has given particular attention to the requirements of Government Departments and proposes to maintain an exhibition of those articles and materials which have been standardised by the Ministry of Works and Buildings. The present-day student of architecture and building is also being especially provided for in his study of materials of every kind. The value of close proximity to the Polytechnic School of Architecture and Building is obvious.

National Eisteddfod Architecture.

Sixteen designs were received in the architectural competition in connection with the National Eisteddfod of Wales—held from August 6-8 at Old Colwyn. The subject was a standardised pavilion for the Eisteddfod, to seat 12,000, and the assessors (Messrs. Percy Thomas, P.-P.R.I.B.A., and T. Alwyn Lloyd, F.R.I.B.A.) have made the following award:—

1st (£75): Mr. Edward Banks, "Lyndhurst," Guinea Hall-road, Banks, Lancs.

2nd (£25): Mr. Idwal Mort, 24, Actongardens, Wrexham.

Ancient Walls Under Guildhall.

In clearing away the débris at Guildhall the remains of two ancient walls have been unearthed below the Art Gallery. One of these is shown in an illustration on this page and appears to be of thirteenth- or fourteenth-century construction. The middle part is probably of the fifteenth century, with modern work above. Behind the wall shown is another wall at such a distance as to suggest a corridor. The antiquity of the lower portion of the wall shown has prompted the idea that it may be a part of Guildhall Chapel, which was rebuilt in the reign of Henry VI and demolished in 1822.

Post-War Planning for Scotland.

A conference on Post-War Planning for Scotland has been convened by the Town and Country Planning Association at Largs during the first week-end of September. Speakers and their subjects are: Lord Balfour of Burleigh—"The Future of Planning"; Sir Cecil M. Weir—"The Location of Industry as a Basis of Planning"; Dr. Dudley Stamp, director of Land Utilisation Survey of Britain—"Land Classification as a Basis of Planning"; Mr. F. J. Osborn, honorary secretary of the Association—"Seven-Point National Basis of Policy."

An Issue of "The Builder."

A reader is anxious to obtain a copy of *The Builder* for February 28 last. As that issue is out of print, we should be most grateful to any reader who could send us a copy which we would forward.

Professional Announcement.

Mr. Alfred E. Nightingale, M.Inst.R.A., has been added to the panel of Assessors of War Damage to the Board of Trade. His London offices are at 10, Shaftesbury House, Vauxhall-walk, S.E.11.

THE NEED FOR NEW BUILDING BY-LAWS

AN ESSENTIAL STEP FOR PHYSICAL RECONSTRUCTION.—2

By ALFRED H. BARNES, F.R.I.B.A., M.I.Struct.E., and C. ROLAND WOODS, M.B.E., Barrister-at-Law.

BY-LAWS BASED ON PERFORMANCE.

It is urged that whenever possible, with a view to giving "the fullest degree of freedom consistent with safety in order that enterprise, progress and economy may not be hampered," by-laws should be based on performance—that is to say, the end to be achieved should be specified and the builder be left free to encompass that end in any way he desired.

In by-laws relating to stability, this is done on a basis of loads and stresses.

The outstanding examples of control by by-laws based on performance are those relating to stability in reinforced concrete and steel-frame construction. (It is regrettable that these ideal examples should have been marred in the case of the Model By-laws by being restricted to "walls." Owing to this, the by-laws permit the designer to rely for lateral support on timber floors and beams or other internal construction which may be entirely uncontrolled.)

By-laws based on performance may be instanced in relation to the two materials previously referred to—brickwork and timber. The Model By-laws provide an alternative set of rules for brickwork (other than for private dwelling-houses), and the L.C.C. By-laws for all brickwork (without exception) based on the ascertained strength of the bricks, the mix of the mortar employed, and the loads to be carried. This method of control prohibits stresses anywhere beyond those appropriate to the material employed. And that is all. Automatically the door is closed to the dangers incurred by accidental omissions from any attempted detail specification of materials and construction. At the same time this door is left open to "enterprise and progress," and to the achievement of economy which is the rightful reward of the skilful designer and scientific constructor.

The L.C.C. By-laws control the use of timber in a similar manner, so that where a higher grade of material capable of higher stresses is employed, a corresponding saving in quantity is effected, and credit can be claimed for continuity, and fixity and other artifices of scientific construction. Like the previously mentioned brickwork by-laws, such by-laws are all comprehensive and leave no chance of dangerous construction covering not merely joists and rafters, but all beams and struts (which are left uncontrolled by the by-laws at present recommended by the Ministry).

But when the L.C.C. timber by-laws were made, the available data necessary to performance by-laws were limited to two or three species, and there still remains much research before full advantage can be taken of this method of control with respect to all the species of structural timbers employed in this country. It is surely the duty of the Department of Scientific and Industrial Research to supply the necessary information and the sane policy of the nation to make the performance of this duty both possible and imperative.

ALTERNATIVE BY-LAWS.

The objection may be made that by-laws based on performance demand a knowledge of building science such as is not possessed by the jobbing builder and the amateur, and that the general adoption of such by-laws would limit building to the skilled constructor. This has been met in as far as this method of control has been adopted in the by-laws referred to, by providing a duplicate set of by-laws by specification. Whether the resultant waste incurred by such by-laws should thus be permitted is a matter for discussion, but whether waste should be legally compulsory under penalty must be held to be beyond question.

If it is to be held that the alternative specific by-laws must be continued for the benefit of the unskilled, then it is submitted that it is doubly important that there should be no hiatus in the specifications (such as those mentioned in the existing by-laws) rendering inadequate construction legally permissible.

CONTROL OF ODD FACTORS.

It appears futile to control a single item in a complicated problem involving the interaction of several factors. An instance of this is furnished by the by-laws determining the minimum area of a window in relation to the floor area of the room. This also affords an example of the vitality of certain by-laws which at every revision may look forward with a certain hope of resurrection.

Presumably the object of the by-law is to ensure adequate light and ventilation to the habitable rooms of a domestic building. (The L.C.C. in their 1937 by-laws extended the application of the requirements to rooms used as offices, but apparently it has been considered unnecessary in such cases as factories and workshops.)

The effectiveness of the fenestral ventilation of a room involves many factors, including:—

The number of occupants.—This is a basic consideration and is, of course, uncontrollable.

The method of heating (if any).

The cubic extent of the room.—As only the floor area is considered under the by-law and the height is not limited, this is not controlled.

The disposition of the windows.—When these are on different walls and "through ventilation" is obtained, a small window area may be far more effective than a larger opening on one wall where ventilation is dependent on diffusion.

The shape of the room.—In an irregularly shaped room it is possible for the window to be so situated (*e.g.*, in an ancillary part of the room practically separated) that its efficiency is seriously impaired.

External conditions.—The L.C.C. by-laws merely require the windows to open "into the open air." The model goes further and requires them to afford "effective means of ventilation." Obviously a window opening into a narrow passage would not be so effective as one looking out over an open space. Indeed, it is not uncommon to find advertisement hoardings fixed a few inches outside the windows. While such windows may be said to open "into the open air" it may be questioned whether they afford "effectual ventilation." That must depend on what is to be understood by the word "effectual"—another instance of lack of clarity.

Lighting presents a problem which comprises some of the foregoing factors in addition to such considerations as the height of the window-head, the height of the sky-line and the angle of incidence.

In view of the number and the complication of interaction of the attendant factors, the floor-area has little or nothing to do with the question, and it is quite possible for window openings to satisfy the by-laws and to be far less efficient than other windows which do not comply.

Such control of odd factors appears to serve no useful purpose, and merely hampers the skilled designer.

REDUNDANT BY-LAWS.

There is much in a building which is essential to safety, but which is quite rightly omitted from by-law requirements because, in his own interest, no sane person erecting a building would omit such items. For instance, there is no by-law requiring a building to be provided with a roof (though requirements regarding the covering of a roof is obviously necessary in the interests of protection against the spread of fire). Although essential to health, there are no by-laws requiring a flue to a fireplace. Yet no builder builds a fireplace without a flue for the simple reason that if he did nobody would live in the house. Again, experience has shown that for the same reason the provision of external door openings fitted with doors to close them requires no by-laws, although the closing of such openings is equally essential to health and would be a simple matter to control.

It may be argued that although such by-laws may be superfluous, there can be no actual objection to their inclusion. This can never be said with certainty. Special circumstances may arise in which these unnecessary by-laws are not only superfluous but detrimental. The argument that a by-law requiring a roof would be unobjectionable (though unnecessary) would prove fallacious in a case where a builder wished to surmount his building with a water-tank instead of a roof.

The by-laws relating to windows (previously mentioned as instancing the control of odd factors) may again be employed to illustrate the redundant by-law.

Tradition has ordained that building by-laws should include these futile and totally inadequate requirements relating to windows and openings. It must surely be obvious that a tenant would require adequate light and ventilation just as he would doorways and doors, and even were it not so and a tenant were so eccentric as not to demand light and ventilation, there is still no legal means of preventing his circumventing the by-law requirement by closing his windows and drawing his blinds.

It is urged that all redundant by-laws such as these should be eliminated.

UNKNOWN REQUIREMENTS.

The long overdue investigation of our building by-laws (*investigation*—not a patchwork *revision*) will probably reveal that their greatest defects are due to the lack of scientific data. Many of the requirements included by force of habit may or may not be essential to "safety"—we simply do not know. If essential, it is important that they should be included and, where necessary, so reinforced or rectified as to ensure their achieving their purpose. Those that are found to be non-essential to that purpose should be ruthlessly eliminated, and our building codes should cease to be cluttered up with requirements, however ancient and venerable, and building practice freed from

COMING EVENTS

Thursday, August 21. The Building Centre. Photographs of Dutch Architecture. At Polytechnic Annexe, Little Titchfield-street, W.1. (Until September 13.)

Tuesday, September 16. Architectural Association. Address by President, Mr. A. W. Kenyon. At 36, Bedford-square, W.C.1. 5.30 p.m.

these impediments to enterprise, progress and economy.

It is recognised that to question the generally accepted tenets of what is termed "sound practice" may be regarded as heterodox, and, furthermore, it is appreciated that in some cases scientific research—when it *is* made—may prove in many cases that existing practice is fully justified; but any such findings will not imply that the requirement should not have been subjected to trial where the arbiter was science and not prejudice.

The height of habitable rooms appears to be a subject which has at least been called into question. For a considerable period prior to the last revision, a minimum height has been prescribed for habitable rooms, both in London and elsewhere. The revised L.C.C. By-law (141(i)) extends the control to rooms used for the purpose of offices. But in the case of the Model By-laws the requirement appears to have been arraigned, and whether the verdict was that the requirements of health bore no relationship to the height of rooms or whether it was merely "not proven," it has been omitted from the revised Model.

The difference between the minimum height of the eight feet or eight feet six inches required by the L.C.C. By-laws and (say) a seven feet minimum necessary to personal convenience and for the accommodation of doors and frames has an appreciable influence on the amount of material and labour as well as on the time factor in building, and the control of the height of rooms should therefore not be imposed unless it can be shown to be necessary to health. The necessary investigation as to the influence that the height of an occupied room exerts on the atmospheric condition should not present any difficult problem to modern chemistry.

The space about buildings required by existing building law is an analogous problem to the last so far as it may be regarded as a requirement for health and not for fire-prevention. Whether scientific investigation will prove its necessity cannot definitely be said until such an investigation has been accomplished; but it does not represent the *prima facie* case that habit of thought would lead one to imagine.

The influence of a house on the health of its occupant is necessarily an influence on a person within a room in the house and not on a person in the space outside. The question is, therefore, one relative to the effect of external space on the condition—atmospheric or otherwise—of any given room in the house. It may be found that the space (as required by the by-laws in front or rear of the building) may have some influence on corresponding fenestral ventilation, but it is evident that that was not the effect contemplated by the by-laws since they contain no requirement that windows must be situated in the front or rear, but permit them to be situated on the flanks which may face a passage or court.

It may be that the origin of this control of space about a building was due to the observed fact that where buildings were crowded together the health of the occupants was inferior to that of persons who occupied buildings which were more widely spaced. Assuming a causal connection between proximity of the buildings and the ill-health of the occupants, it would have been logical to institute rules requiring a minimum space about the buildings, but that connection has never been definitely established, and other factors—such as poverty—which are commonly present when overcrowding occurs, may be found to be responsible.

Indeed, there are circumstances which appear to indicate this. As the building law at present stands, it would not be permissible to erect a number of back-to-back bungalows under separate roofs. Nevertheless, where such "bungalows" are not only back-to-back but side-by-side and one above another and served by a common entrance (thus constituting a "block of flats") the building laws are acquiescent, and in a neighbourhood such as Mayfair no detriment to health occurs.

If scientific investigation shows this requirement to be unnecessary, it should be treated in the manner advocated for all superfluous by-laws and expunged from the code. On the other hand, if the retention of the provisions be necessary to health, they should be made effective by being related directly to the rooms and their occupants and not to buildings as a whole in such a manner as to forbid a danger in the case of small houses spread over a large area and permit it in a block of flats.

Surface concrete is another example of a general requirement of building by-laws, the necessity for which should be summoned for trial. The L.C.C. By-laws (28) require the site of every building to be covered with concrete. The Model By-laws (20) make the general rule, but exempt cases where "the exceptional condition of the site or exceptional nature of the soil renders this requirement unnecessary." The Model By-laws also permit as alternatives asphalt or other not less suitable material. The marginal note indicates that the object of the requirement is "Prevention of damp."

The first question to arise is (assuming the precautions indicated to be necessary to the "prevention of damp"), whether concrete of the mix specified is in fact a "suitable material" to prevent the passage of moisture.

Probably it will be agreed that in the case of a "solid floor" a layer of some impervious material is called for, but in the case of hollow timber floors not in contact with the ground but with a space beneath, the necessity for a damp-proof covering is not so likely to be upheld. Any moisture conducted to the underside of the floor must necessarily be air-borne, and if the space be "adequately" or "thoroughly" ventilated, the condition of the intervening air might be expected to approximate to that of the external air, whether the ground immediately beneath be covered with concrete or with water.

The size of flues from fireplaces may be mentioned as one example of many vexatious trifles of doubtful necessity. The L.C.C. By-laws (132 (2)) require every such flue to be at least 7½ in. across in every direction, which in ordinary brick construction when pargeted would be the size normally adopted, by-law or no by-law, unless it were known that any other size would be more efficient or otherwise economical.

Professor P. O. Rosin, of the British Coal Utilisation Research Association, has carried out considerable research in the matter of flues, and although his investigations are not finished and conclusive, they indicate as far as they go that the by-law minimum is too large for the economic burning of coal fires. There is no by-law requiring a flue at all, and surely if its provision can be left to the discretion of the builder so also can the question of its size. This is a small matter compared with many of the questions requiring further investigation, but it is convenient as illustrating the futility of making by-laws which not only bear no relationship to the three objectives of building-law postulated, but may be found actually objectionable from the point of view of efficiency and which would be totally unnecessary in any case.

(To be concluded.)

CORRESPONDENCE

[While we are glad to publish letters on professional and other matters of interest to our readers, it must be understood that we do not necessarily endorse the remarks of correspondents, who will oblige us if they will express their views as briefly as possible.]

Militia Camp Inquiry.

To the Editor of *The Builder*.

Sir,—My attention has just been directed to the letter of Mr. Alan Davson in your issue of June 13. Surely his interest in this matter is belated and perfunctory, or so I gather from the remark that "The plaintiffs were nameless, the defendants unknown, and the charges unspecified."

I commend to Mr. Davson's notice the back files of at least one hundred British newspapers in the past year, and some Australian and New Zealand journals, which, after the issue of Mr. Justice Simonds's report, still refer to the Militia Camp scandal.

I recommend Mr. Davson to read Hansard of May 2, 1940, and, if he can get them, to wade through about twenty Hansards since that date, and there see the M.P.s who are agitating for a public judicial inquiry, at which not only will the plaintiffs be named but the defendants and the charges. One hundred or more M.P.s of all Parties are behind this demand made by the plaintiffs, of whom I am one—and no anonymous person either. For I came right out into the open at once and intend to remain there until this matter is cleared up.

I had one experience of a secret inquiry conducted by Sir Cyril Entwistle. This inquiry was described as just a friendly preliminary inquiry, and I was refused permission to bring witnesses; this inquiry occupied less than two hours. Therefore I refused to accept the invitation extended to me by the Select Committee to attend their secret inquiry, although, despite my absence, they issued a report which corroborated mine. I commend this report to Mr. Davson.

None of the plaintiffs have ever appeared before Mr. Justice Simonds, and what he had before him for consideration is a mystery to us.

The defendants have their remedy, if they feel that they have to be defended, by means of letters in the Press. A public inquiry will clear the air, allay the distrust engendered in the minds of millions of taxpayers, and, above all, it would do justice to that fine corps, "The Sappers," and be a real contribution to the war effort.

Alan Reid-Kellett, Major.

162, New Cut West,
Ipswich, Suffolk.

London Builders' Emergency Organisation.

To the Editor of *The Builder*.

Sir,—We have read with interest the matter contained in your issue of August 15 with regard to the London Builders' Emergency Organisation, and we would point out that the Federation of Greater London Master Builders, through its predecessor association, namely, the North London Master Builders' Association, which has a membership of 420 master builders, was also responsible for the scheme as published, and is represented upon the Executive Committee which controls the matter on behalf of the Ministry of Works and Buildings.

Newton, Bruce, Venning & Co.,
Secretaries,
Federation of Greater London
Master Builders, Ltd.

23, Compton-terrace,
Upper-street, N.1.

(Correspondence is continued on page 172.)

GENERAL VIEW.

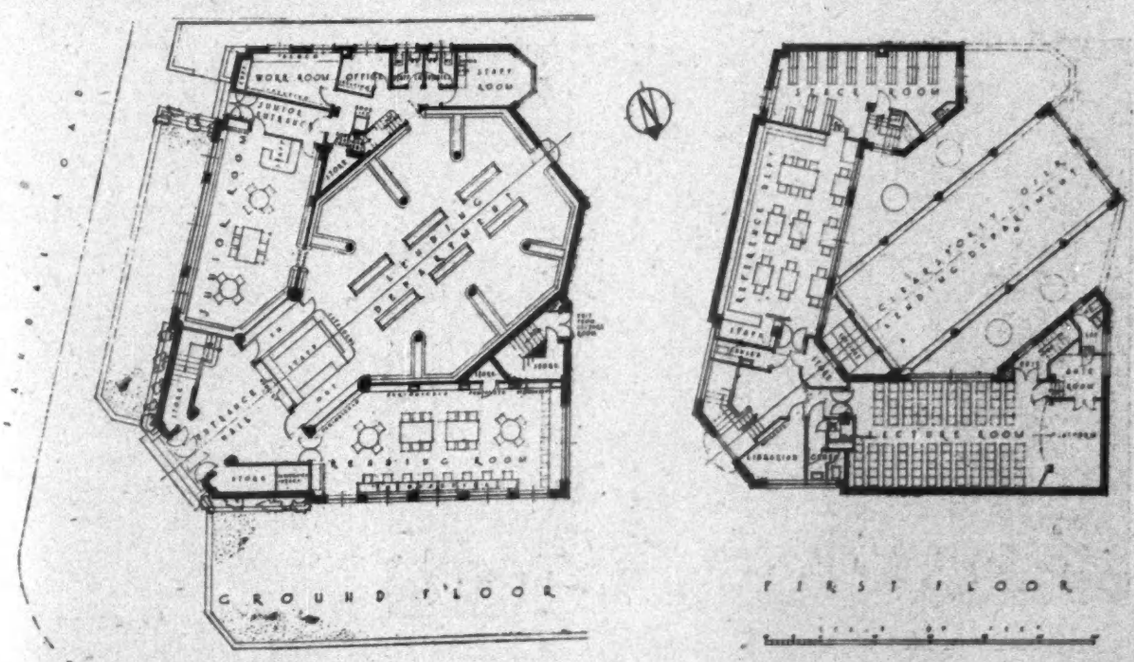
CENTRAL LIBRARY, NEW MALDEN, SURREY.

MR. A. R. GOLDTHORP, B.Sc., BOROUGH ENGINEER.

MR. F. C. OTTON, A.R.I.B.A., ARCHITECTURAL ASSISTANT.

THIS BUILDING WAS COMMENCED IN March, 1939, and has been carried out to designs prepared by the Borough Engineer, Mr. A. R. Goldthorp, B.Sc., chartered civil engineer, chartered surveyor, registered architect, and his staff, the principal architectural assistant being Mr. F. C. Otton, A.R.I.B.A.

PLAN.—The building has been planned to make full use of the corner site, the line bisecting the angle forming the main axis, with the entrance on the corner. The lending department is symmetrically disposed on this line, and is a single-storey room with clearstorey windows, and circular roof lights at each side. The north wing fronting Kingston-road contains the reading room on the ground floor, with lecture room and librarian's office above. The east wing, which fronts Sandal-road, comprises the junior room, with the reference department above. On the south side are situated work room, office, staff



LENDING DEPARTMENT, LOOKING TOWARDS ENTRANCE HALL.

room, stores and staff lavatories, with the stack room above.

The main staff enclosure is placed in a central position, with glazed screens allowing supervision over the entrance hall, reading room and junior room as well as the lending department. The shelving for books in the lending department is arranged around the walls, together with projecting fitments and island cases to give accommodation for approximately 12,500 volumes.

The reading room is fitted with racks to take about 70 magazines and periodicals. Additional tables are provided so as to give accommodation for a total of 28 readers.

The junior room, which has a separate entrance from Sandal-road, contains wall shelving for approximately 2,200 books, and seating accommodation is provided for 14 readers.

On the first floor, the reference department is fitted with wall shelving for approximately 1,600 books and ample built-in cabinets.

The lecture room will seat 110 people, and a small platform with ante-room is provided, also a separate projector room.

The stack room is fitted with steel shelving taken from the old library, and will provide ultimate accommodation for about 10,000 volumes. A book lift and staircase give access from the back of the building to the stack room.

THE READING ROOM.

CONSTRUCTION.—The building is a steel-framed structure with brick walls, reinforced concrete floors and roof slabs. The lower roof slabs over the lending department were designed to take an additional super load in case the higher portion of the building should be demolished by enemy action and thrown over these lower roofs.

The external walls have been finished in a brown, hand-made sand-faced brick laid in Monk bond and pointed with light cream-coloured flush joints, with window-sills, cornices, copings, etc., in reconstructed Portland stone. Brick flower-boxes have been constructed to flank the entrances.

HEATING AND VENTILATION.—The building is heated by a low-pressure hot-water installation operated by an automatic gas-fired boiler with thermostatic clock control and accelerator. As most of the wall space was required for book

CENTRAL LIBRARY, NEW MALDEN, SURREY.

shelving, a large portion of the heating surface has been provided by flush-fitted "Rayrad" panels in the ceilings, supplemented where possible by wall radiators and heating pipes at skirting level. The fresh-air inlets to the lecture room and reference department are connected to vertical ducts in the external walls which discharge the air at a height of 7 ft. or more above floor level through metal grilles, being warmed by passage over a grilled radiator.

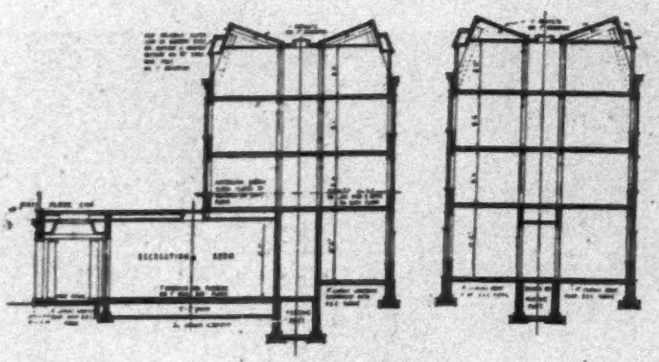
PLAQUES.—Fresh-air inlets to the lecture room and reference department have been combined with nine sculptured panels to form cast-stone circular plaques, by Mr. T. Mewburn Crook, F.R.B.S., which are a prominent feature of the elevations to Kingston-road and Sandal-road.

The quantity surveyors were Messrs. E. C. Harris and Partners, and the clerk of works Mr. V. S. Hyde, A.I.A.A. & S. The general contractors were Messrs. M. J. Gleeson, Ltd., North Cheam, Surrey, whose general foreman was Mr. W. Debling. Sub-contractors and suppliers engaged are on page 175.

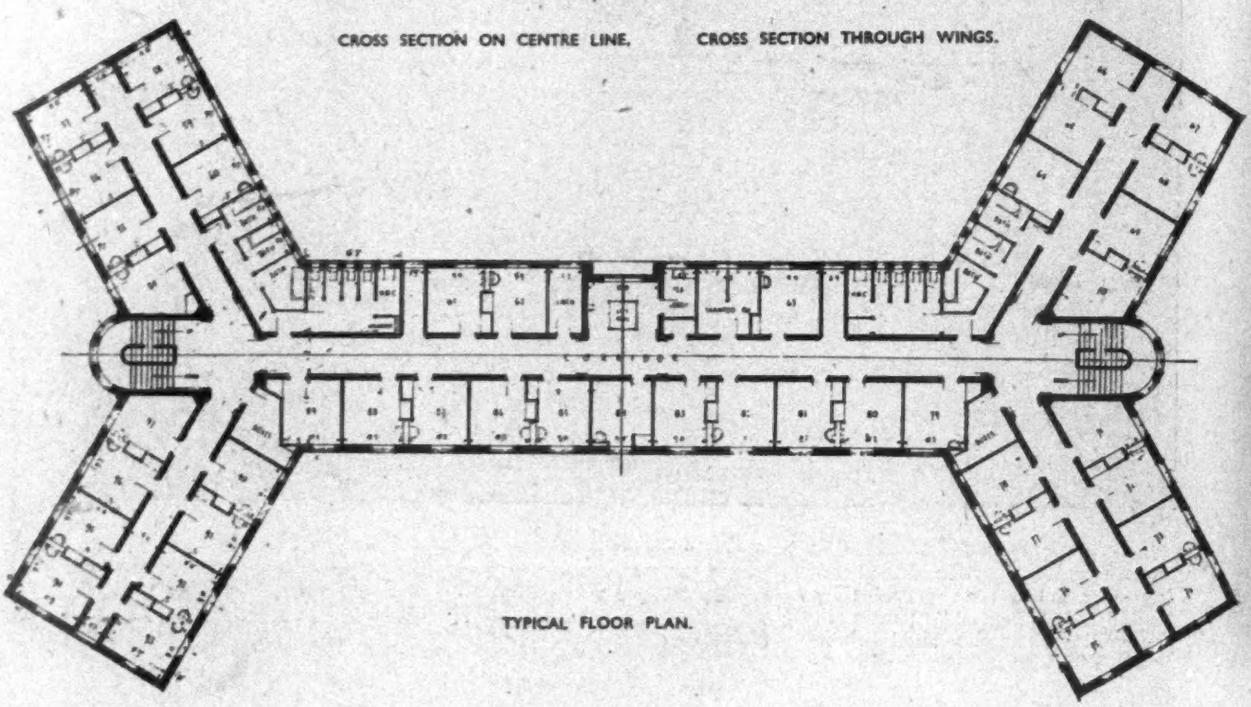
Above: JUNIOR ROOM, FROM STAIRCASE.
Right: ENTRANCE HALL.

CENTRAL LIBRARY, NEW MALDEN, SURREY.

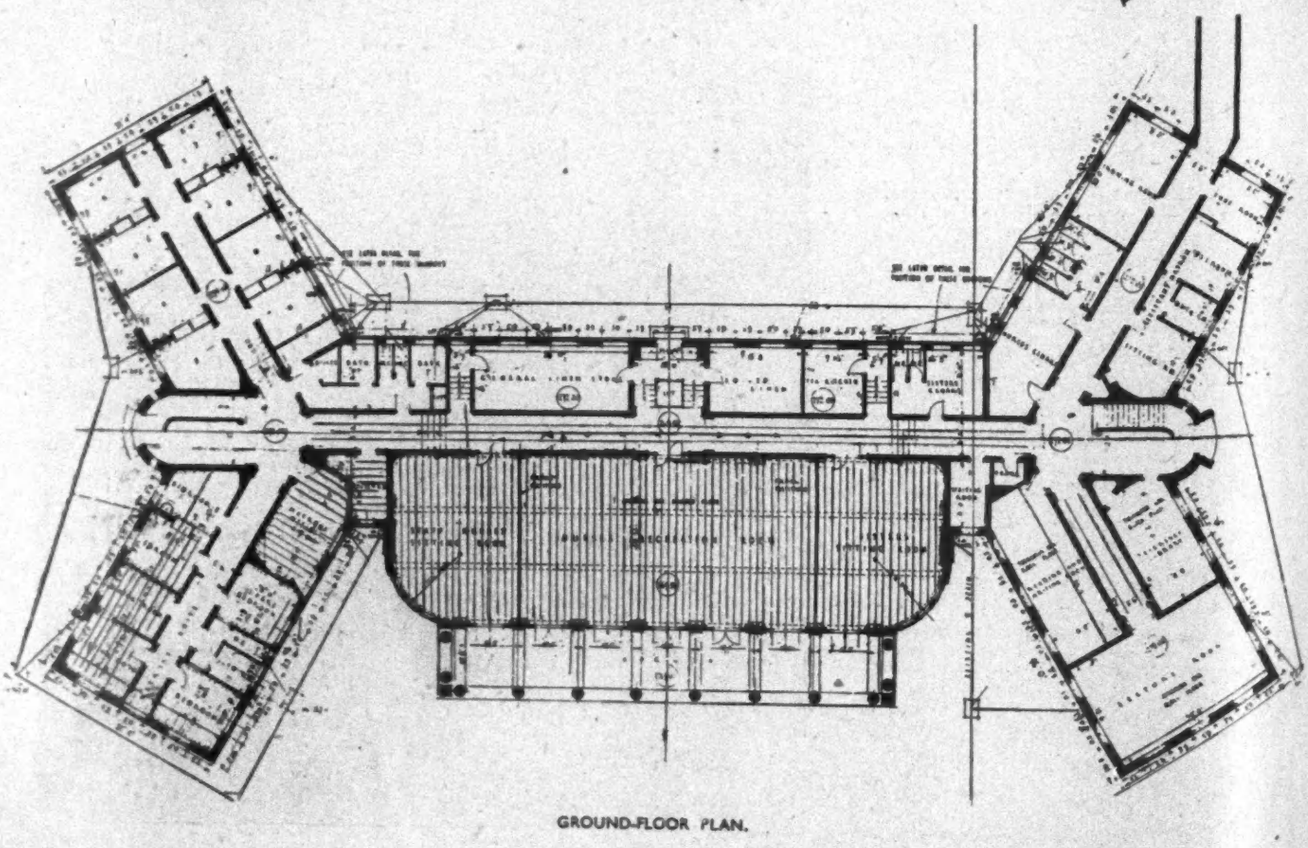
MR. A. R. GOLDTHORP, B.Sc., BOROUGH ENGINEER.



CROSS SECTION ON CENTRE LINE. CROSS SECTION THROUGH WINGS.



TYPICAL FLOOR PLAN.



GROUND-FLOOR PLAN.

NURSES' HOME, ISOLATION HOSPITAL, LEICESTERSHIRE. MESSRS. SYMINGTON, PRINCE & PIKE, FF.R.I.B.A., ARCHITECTS.

SOUTH FRONT, SHOWING LOGGIA.

NURSES' HOME, ISOLATION HOSPITAL, LEICESTERSHIRE

MESSRS. SYMINGTON, PRINCE & PIKE, FF.R.I.B.A., ARCHITECTS.

GENERAL AND SITE.—Nurses' home for approximately 150 sisters and nurses, matron and assistant matron. Ground falls away to the south; building faces the main road.

CONSTRUCTION AND EXTERNAL FINISHES.—Brick construction—14-in. external walls. Recreation room—steel-framed. Timber roof—covered with old Delabole slates. Partitions—plaster blocks. Floors—hollow tile. Recreation room—oak floor on joists. Plum-coloured facing bricks with cast-stone dressings. Wood sash windows and wood French casements are fitted.

PLAN.—Accommodation is arranged on four floors, most bedrooms facing south. Besides bedrooms, ground floor consists of a recreation room which can be divided into three compartments, the sisters' sitting-room, nurses' recreation room, and staff nurses' sitting-room. Matron's and assistant matron's offices and quarters are situated in one wing; the library, reading-room and lecture-room in the corresponding wing on the other side. Night nurses have special accommodation on the first floor, cut off from the remainder of the building by glazed doors.

INTERNAL FINISHES.—Walls—plastered, finished with cream-coloured paint. Floors to staircase, corridors, bathrooms and w.c.s—terrazzo. Recreation room—oak floor, and Jarrah wood blocks are laid in the bedrooms. Built-in wardrobes are provided in the bedrooms. The general contractors were Messrs. James Chapman & Son. Sub-contractors and suppliers engaged on the work are on page 175.

THE NURSES' RECREATION ROOM.

THE MAIN ENTRANCE.

THE MAIN STAIRCASE.

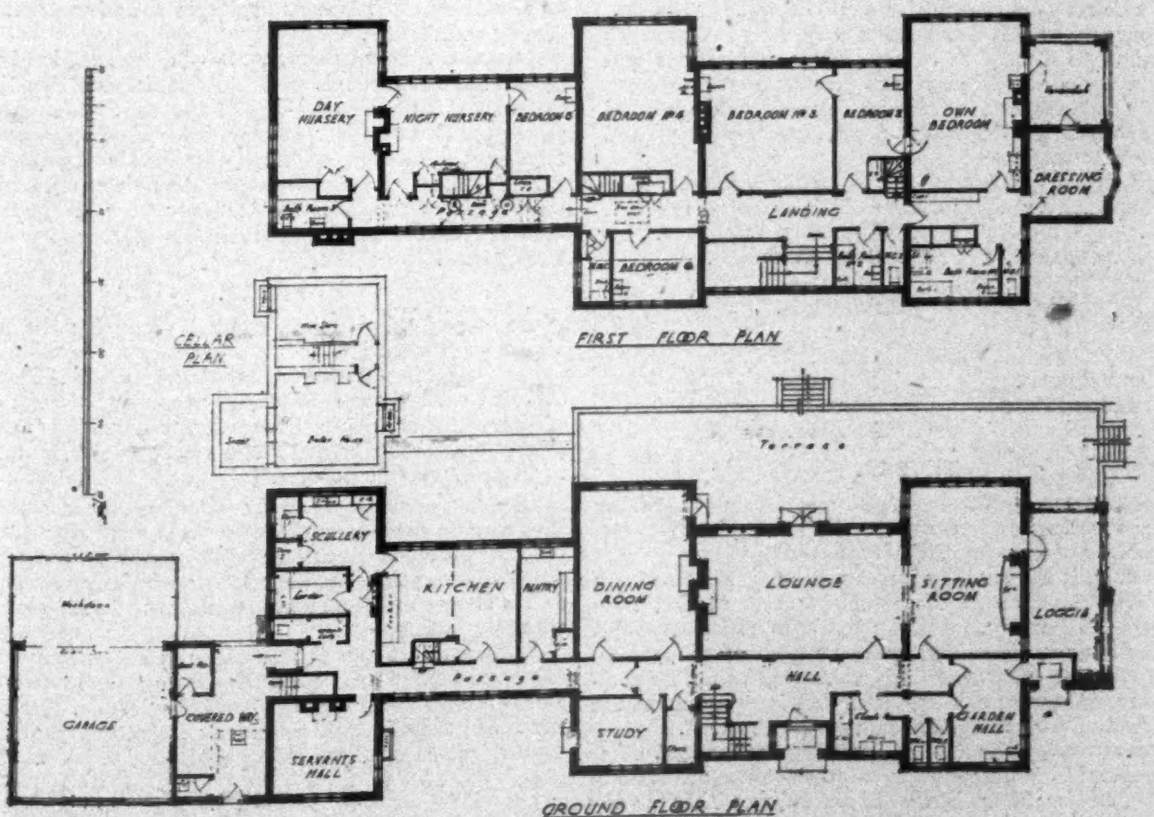
NURSES' HOME, ISOLATION HOSPITAL, LEICESTERSHIRE. MESSRS. SYMINGTON, PRINCE & PIKE, FF.R.I.B.A., ARCHITECTS.

VIEW FROM GROUNDS.

"GREAT AUCLUM," BURGHFIELD COMMON

MESSRS. CHAS. SMITH AND SON, F. & A.R.I.B.A., ARCHITECTS.

BUILT AT BURGHFIELD COMMON, BERKS, for Mr. Neil W. Gardiner, this house commands magnificent views of the surrounding wooded country. Faced with 2½-in. bricks, the house is roofed with hand-made tiles. Internally, the lounge and sitting-room can be thrown together to make one apartment by means of sliding doors. Messrs. Henry Cooper & Sons were the quantity surveyors, and Collier & Catley, Ltd., of Reading, the builders.



WAR-TIME BUILDING PRACTICE

By R. Cotterell Butler, A.R.I.B.A.

61—WAR-TIME AND POST-WAR REHOUSING: CONSTRUCTION—2. MATERIALS.

A review of recent developments and development trends in connection with building materials.

THE most obvious and widespread example of development in the industry since the beginning of the war is naturally the increased production of substitutes for materials no longer widely available. Second in importance only to this has been the development of constructional techniques particularly suited to the requirements of the war organisation.

Generally speaking, the evolution of substitutes has largely been an adjustment of technique employing alternative materials as substitutes rather than the evolution of entirely new materials, for war-time practice has, up to the moment, produced but very few entirely new materials compared with the enormous number of revised techniques developed.

In reviewing recent developments in building materials, although attention must primarily be given to the revised techniques now available for the industry, it is advantageous to consider these developments in connection with the materials to which they refer, rather than with specific structural systems.

In discussing war-time developments, therefore, it should be appreciated that their relevance will certainly not cease to exist once the war ends; and that in many instances recent developments will need to be taken into consideration not only in view of post-war limitations, but additionally because their integral worth will be of value to the industry quite apart from any question of supply limitations.

In compiling data on development and development trends such as are being discussed here, the practicable impossibility of being either fully up to date or entirely comprehensive must be appreciated. Not all developments may be fully publicised—even in the building industry—and research and development never stand still long enough for the reviewer to be certain of absolute comprehensiveness.

The purpose of this article is to review and co-ordinate rather than to discuss in detail. Many applications and developments outlined below have already been considered in previous articles, and those which have not will be referred to when considering the detail construction of war-time and post-war rehousing.

For convenient reference, the materials discussed have been grouped on a roughly scientific basis as follows:—

Timber.	Concrete Products.
Fibre Wallboards.	Clay Products.
Paper.	Plasters.
Cork.	Asbestos.
	Slag.
	Glass.
Irons and Steels.	Plastics.
Non-Ferrous Metals.	Asphalt.
Alloys.	Rubber.

TIMBER.

FIRE RESISTANCE. — The natural association of timber with combustion does not take into consideration the practicability of treating natural woods so as to render them fire-resisting, if not actually incombustible. Stimulated by the present importance of minimising risk of fire, it is possible that development along the lines of impregnation may result in a considerably increased use of treated material, or even the use of treated timber and that alone, for post-war structural purposes. Inevitably an increase in the use of naturally fire-resisting timbers may be expected.

IMPREGNATION. — The use of synthetic resins and other impregnators to increase the weather-resistance, mechanical strength, and/or fire resistance of natural wood has already been extensively investigated. It is unlikely, however, that the use of such material for increasing mechanical strength would be widely used in the building industry, but the impregnation of plywood sheets to effect weather-resistance might well develop in connection with prefabrication techniques.

LAMINATION.—Immense potentialities exist in the use of built-up timber elements either of a structural or purely surfacing or finishing nature. The use of normal plywood has, of course, already been widely developed, but its use in impregnated form for external finishing has not and cannot be expanded until import facilities become normal again.

PREFABRICATION.—Structures erected from prefabricated elements have been developed here and elsewhere for some time. As soon as import facilities allow, it is probable that the development of timber structures exhibiting a high order of prefabrication will take place, and that in connection with such buildings the developments discussed above would be extensively exploited.

FIBRE WALLBOARDS.

FIRE-RESISTANCE. — Many wallboards which have been on the market for some time exhibit a high degree of resistance to fire. In almost all instances these materials include cellulose in some form or other in their composition, but the material is so treated as to render it virtually incombustible, or at least capable of no greater action than simple charing. Special combinations of treated cellulose fibres together with Portland cement and asbestos have been developed to resist fire to a considerable degree, and post-war developments along these lines are likely.

WEATHER RESISTANCE. — Cellulose fibre wallboards constructed with synthetic resins as binders and/or impregnated with resinoids can be manufactured to display a high impermeability to moisture and weather generally; yet at the same time their combustibility need not be in any way increased. These materials are likely to undergo considerable development as the manufacture of synthetic resins increases, and should offer particular advantages as external weather-proofing membranes.

SOUND AND THERMAL INSULATION.—The use of fibre boards for insulation purposes has not undergone particular development as a direct result of the war, such materials having been successfully employed for these purposes for some time. The value of fibre boards for insulation is, however, likely to increase rather than decrease, and the lower density materials will certainly play an important part in both permanent and semi-permanent post-war development.

PAPER.

The use of suitably impregnated paper for the manufacture of water-resisting membranes has played an important part in emergency building generally. Post-war uses will certainly include the development of membranes of impregnated paper integrally sandwiched between insulating and other normally non-weather-resisting materials to form an impervious layer.

The development of strong building paper (such, for instance, as those manufactured from sisal fibres), water-proofed with bituminous material as a base for concrete screeds, is certainly an important emergency development and is likely to have certain applications even in permanent post-war building.

In addition to the above, paper is extensively used in the manufacture of laminated plastics, and waste-paper in the production of wall and insulating boards. Both these groups of material are potentially important products for lightweight construction on a prefabrication basis.

CORK.

This material, being an imported one, has not been developed to any great extent in war-time building practice. However, the valuable insulating properties it possesses

make it certain that, when normal import arrangements operate again, its use for lagging and insulation generally and as a wear-resisting and silent flooring material will continue to increase.

One comparatively recent development in the use of this material which is likely to be widely applied after the war is its use as a special aggregate for lightweight concrete. By suitable vibration, composite, dense and insulation-lined walling elements may be fabricated, the heavier aggregates forming a dense outer layer and the cork an insulating internal finish.

CONCRETE PRODUCTS.

PRECAST CONCRETE.

VIBRATION.—Considerable improvements in the quality, and extensions in the possible scope of preformed concrete elements have resulted from developments in the technique of tamping and vibration generally. The war-time demand for preformed concrete elements of all kinds, having maximum efficiency, and at the same time low cost, has meant a vastly augmented vibration practice. Among its greatest advantages must be included the rapid pre-set which is obtainable, enabling elements to be formed and rapidly removed from their moulds, thus considerably speeding production.

PRESTRESSED REINFORCEMENT.—The need for economy in steel has been partly responsible for the accelerated development of the technique of reinforcing concrete elements with prestressed metal. By casting elements around stretched wires or very light rods, a highly efficient and economical reinforcement is obtained. It is probable that considerable use will be made of this technique in connection with all concrete prefabricated housing.

SHUTTERING.—Large-scale organised building projects have made the use of highly durable shuttering a practicable possibility (shuttering costing, perhaps, a considerable amount in the first instance, but having a long life). At least one scheme—for camp construction but equally adaptable to housing—has employed such arrangements in connection with mechanically supplied concrete.

Permanent shuttering, intended to fulfil the dual purpose of forming the concrete and providing either a finish or insulation or both, has also become widely used. A notable development in this field has been the use of fibre boards or similar materials as permanent centering for poured concrete flooring spanning between light beams.

FITTINGS, ETC.—The need for substituting timber and metal has meant the development of the use of precast concrete fittings of many kinds. Vibration has, of course, played an important part in this, and the scope of the technique is continually increasing.

ROOFING ELEMENTS.—While early concrete tiles were largely based upon clay prototypes, recent developments in the manufacture of concrete tiles have exploited more and more the particular properties of precast concrete. Increases in efficiency are rapidly making it possible for considerably larger elements to be used which, in combination with improved methods of locking, result in lighter roof finishes.

CELLULAR CONCRETE.

The importance of light concretes having a high insulating value, has resulted in a broad development of techniques for forming cellular concretes. Low-density blocks having considerable mechanical strength (obtainable by aerating Portland cement and fine aggregate mixes) find wide application for the inner lining of external walls and for partitioning. The development of methods of forming tenacious weather-resistant skin surfaces on lightweight materials should result in a further expansion of the use of highly insulating yet economic panel walls.

LIGHT-AGGREGATE CONCRETE.—To obtain similar properties to the above, together with increased strength and low absorption, Portland cement mixes using lightweight aggregate material such as breeze and pumice have developed. These materials are not in any way war-time developments themselves, but methods of use have certainly been considerably expanded.

WOOD-WOOL CONCRETE.—This material—consisting of wood-wool rendered suitably inert bonded together by Portland cement—is virtually an equivalent of magnesite-bonded material, largely developed here, in the United States and elsewhere. The material has a comparatively low density, high insulating properties, and considerable mechanical strength. Used as permanent centering for mass concrete, highly efficient roofing has been produced. Its other uses include applications as walling material in conjunction with a weather-resisting skin, as insulation applied in thin sheets, and as permanent shuttering.

CLAY PRODUCTS.

BRICKWORK.

REINFORCED BRICKWORK.—The technique of construction in reinforced brickwork is neither a war-time development nor even an entirely recent one. The advantages of using integrally reinforced brickwork wall, pier and beam elements have, however, been made particularly obvious in connection with many types of construction specifically suited to war-time conditions. The post-war use of integrally reinforced brickwork load-bearing or panel elements in connection with lightweight structures is likely to be considerably bound up with the development of high efficiency constructional systems in this material.

SYSTEMATISED CONSTRUCTION — Contemporary investigation into the practicability of erecting brickwork structures by site prefabrication techniques has shown that, given suitable organisation and a large enough project, considerable economic and other advantages may be gained through the highly efficient results of building semi-mechanically with large-size elements prefabricated in a site factory.

SPECIAL FORMS OF BRICK.—Recent developments have resulted in a greater standardisation of common brick. At the same time, however, investigation into the use of special interlocking or self-centering bricks and the developed use of hollow elements have proved the particular advantages of these types for special purposes, such as an increased use of unskilled labour and the construction of lightweight structures.

HOLLOW BLOCKS.

LIGHTWEIGHT CONSTRUCTION. — Extruded clay elements of hollow section have been shown suitable for the erection of extremely lightweight structures, and building elements of considerable size have been found a practicable possibility. Large lightweight elements, by reducing the amount of jointing necessary per unit of material, have not only shown the practicability of speedier erection by the use of large elements, but have illustrated the low weight of walls and partitions so constructed. Considerable investigation into waterproofing techniques, enabling extruded clay blocks to be used for external walling, has been justified by the value of waterproofed hollow blocks for semi-permanent and even permanent forms of construction.

SPECIAL FORMS.—Similar developments to those discussed above in connection with brickwork have shown the potential advantages of employing special self-locating elements to increase the speed of erection possible with skilled labour, or make extended use of unskilled labour possible.

FAIENCE.

The use of larger-sized elements in this material for external covering purposes is not directly a war-time development. For reconstruction purposes, however, in connection with lightweight insulating walling the use of this material as an external weather-resisting finish—particularly in urban districts—is likely to develop considerably.

ROOF TILING.

Natural limitations to the development of traditional forms of clay tile restrict somewhat their use for lightweight forms of construction. Improvements enabling larger elements to be used, together with developments in locating and weather-sealing to reduce lapping and consequently roof load are, however, in progress, and may do much to bring clay tiling into line with lighter forms of roof finish.

Next week the remaining materials summarised at the beginning of this article will be discussed.

CORRESPONDENCE

(Continued from page 162.)

Grouping of Small Firms.

To the Editor of *The Builder*.

Sir,—I thank Mr. Wall for his letter in your last issue, and for the details of the scheme applying to the London area. I admitted when I wrote my letter that I was unaware of the details of the scheme, but having carefully read the details of it I see no reason to alter my views. It seems to me that the large firms think it is only natural and right that all the sacrifices should be made by the medium and smaller firms—in fact, that they should be grateful to these large firms for allowing them to have a few of the crumbs.

What with Executive Committees, the Group Leaders and their committees who are to be organisers for forming a number of units under a unit leader, we shall find ourselves in such a maze of social snobbery and influence that it can only result in widespread dissension and suspicion in the industry. It is for this reason that I hope it will not be long before the Government takes complete control of the industry and so cuts out all this quibbling as to which large firm shall have this or that contract, and who shall this or that small firm work for. Most of the firms would then feel that they were really doing their bit in the national effort and not merely working for the advancement of a small and favoured section of the industry.

C. H. Griffiths.

To the Editor of *The Builder*.

Sir,—I quite agree with C. H. Griffith's letter in your issue of August 8. It is about time the Government Department concerned put on their thinking caps and did what they suggested at the outbreak of war, *i.e.*, conscript us all. I am only a small country builder, and, since the outbreak of war, have endeavoured to do what the Government asked us to do, namely, "Carry on"; this I have done, but to a great loss to myself. Now we are given to understand that after September 1 we shall not be allowed to carry out any private work or repairs. What is to happen to us? If some practical builder can answer this question it will be very much appreciated. J. W. Harris.

Mayfield, Sussex.

*** We think our correspondent is in error in his reference to the effect of the Government's Order for Registration of Builders. The Regulation (see page 173 of this issue) requires all builders to register by September 1, failing which they will not be permitted to carry on business after October 1. But such registration does not disallow them from carrying out work. On the contrary, it is designed better to mobilise the resources of the industry, and, in conjunction with the area schemes for builders' emergency organisations, should do something to bring the small builder into the war construction effort.—Ed.

British Stone—Building, Decorative and Monumental.

To the Editor of *The Builder*.

Sir,—Last February a letter appeared in a number of trade journals suggesting that producers of British stone for the above purposes might feel that the time was ripe for the development of an organisation which should have as its principal object the devising of machinery for presenting to the Government and appropriate authorities an organised demand for adequate restrictions on the importation of foreign stone, and in particular of dressed and worked stone, in order (1) to meet unfair foreign competition, (2) to foster the interest of the industries concerned carried on in the United Kingdom, and (3) to provide the fullest possible employment for workmen and craftsmen in these industries.

The response to this letter was gratifying, and resulted in a meeting of producers being held in Birmingham on May 21. The meeting was not looked upon as the first meeting of an association, but rather as an unofficial gathering for the interchange of views, with the object of ascertaining to what degree the formation of an organisation of the type which was envisaged might be of advantage to the industry.

This letter is a sequel to that meeting, and we desire to record that it is our opinion:—

1. The circumstances call for the formation of an organisation which should have as its object the development of the measures necessary to ensure the fullest possible use of British stones for monumental, decorative and building purposes—particularly in the post-war period—accompanied by demands for the application of appropriate restrictions on the importation and use of foreign stone, and especially of dressed and worked stone.

2. The organisation in question should not deal with matters relating to prices, labour conditions, rates of pay, or inter-competition between British companies, and should not trespass in any way upon the activities of existing freestone, granite or marble associations.

3. A number of existing associations are operating, in their various phases, to the advantage of the quarrying industry, but in none of them does there appear to be the machinery for pursuing what is set out as the object of the proposed new organisation, although in some cases their activities may have a bearing on this object. Representation of such associations on the council of the proposed organisation would be welcomed, for in this manner activities would be linked up directly and intimately.

4. The traditional and practical virtues associated with natural stone should be continuously impressed upon the minds of those who will have the eventual selection of materials.

We propose to call a national meeting at an early date, with a view to determining the form of the projected organisation, and we hope that every quarrying company engaged upon the production of stone for the purposes detailed will be represented.

We regard the object in view as one of primary and vital importance to the industry, and we do think that the expenditure of time and energy will be amply repaid by the results which we hope to achieve. It will be futile to wait until the war is over and then expect to develop quick action. The position calls for *immediate* action, so that we may have time to develop our plans logically and with the precision which will be necessary if we are to succeed.

We would ask that those interested should communicate with Mr. John Hadfield, The Hopton-Wood Stone Firms, Ltd., Matlock, Derbyshire.

(*Signed*) W. D. Esslemont, for the Aberdeen Granite Manufacturers' Association; E. E. Way, for F. J. Barnes, Ltd.; A. N. Pictor, for the Bath and Portland Stone Firms, Ltd.; John Davenport-Handley, for the Clipsham Quarry Company; C. F. Bishop, for the Cornish De Lank Granite Quarries Company (owners, T. W. Ward, Ltd.); R. Pascoe, for the Cornish Granite Masters' Association; Frank Scott Russell, for the Forest of Dean Stone Firms, Ltd.; R. F. Drake, for S. Ginesi and Co. (1933), Ltd.; F. D. Gregory, for the "Gregory" Quarries, Ltd.; G. G. Seymour, for the Ham Hill and Doulting Masonry Co., Ltd.; John Hadfield, for the Hopton-Wood Stone Firms, Ltd.; H. E. Booth, for the Hornton Quarries, Ltd.; H. W. Darbishire, for the Penmaenmawr and Welsh Granite Co., Ltd.; H. B. Fleming, for the Shap Granite Co., Ltd.; F. Partridge, for the South Western Stone Co., Ltd.; E. M. Brooke-Taylor, for the Stancliffe Estates Co., Ltd.

THE BUILDING INDUSTRY

THE GENERAL POSITION

"The present position of the building and works industries remains one of increasing dependence on war-time demands," states the current issue of the *Building Industries' Survey*, published by the Building Industries' National Council, 110, Bickenhall-mansions, Bickenhall-street, London, W.1. "The volume of building work unconnected with the national war effort now being executed must be comparatively meagre, as beyond that needed for the most essential repairs there is no man-power available for other civil work. It is doubtful whether 5 per cent. of the available man-power of the industries is now employed on purely civil building. The resources of the building and works industries are thus, for practical purposes, wholly engaged on military and civil defence works.

"Varying measures of regimentation are increasingly being imposed on the industries in such a manner as to impair their general efficiency and ability to maintain even normal output. Whatever the building and works policy of H.M. Government may be (it has not yet been defined), there is a striking absence of concerted direction. In these circumstances the building and works industries remain in a state of day-to-day instability. Ordinary forward business planning is impossible, as, while it is manifest that H.M. Government must have a large actual and potential reserve of building work to be undertaken, no single unit making up the building group of industries is in a position to plan or organise their output over any known period. While these adverse circumstances prevail production is bound to decline. H.M. Government appear to prefer a state of day-to-day expediency rather than a long-term policy of administrative orderliness. Accordingly, the industries remain dependent from day to day on the placing of orders by a slow-working and disjointed administration—the origin of all the ills which have affected the industries during the whole of the war period.

"A cleavage between the administration of H.M. Government's building requirements and the building and works group of industries is developing; a cleavage based on the highest of constitutional principles. The principles of the administration appear to be rigid regimentation, reducing those industries to a condition of unorganised automata directed by an administration lacking the full confidence of the industries. On the other hand, the principle on which the industries base their approach to their war-time obligations and problems is the acceptance of responsibility for their own output and production. In spite, however, of persistent considered representations to H.M. Government, its Departments of State manifestly prefer their own expedients to the efficiency of a free and untrammelled industry. The industries will no doubt continue, in the national interest, to maintain their pressure on H.M. Government for more enlightened industrial conditions.

"In the meantime, whatever measure of unemployment may still exist in the industries, it is gradually being reduced, but with what effect on output or production it is impossible to indicate. So far as traditional building materials are concerned, the output, while still being probably well below the normal, is none the less at its war-time maximum, although the matter of redundant resources in those industries is becoming a matter of increased concern. The remedy for the ills which are now affecting the industries, and consequently the nation as a whole, lies in the creation of a more orderly and intelligent relationship between the demands of Government and the available resources of the industries."

REGISTRATION OF BUILDERS

MINISTRY OF WORKS ANNOUNCEMENT

EVERY builder or civil engineering contractor in the country must register by September 1, otherwise he will not be permitted to carry on his business after October 1. That is the effect of a new regulation which has just been issued.

The regulation does *not* apply to employees. It does apply to all undertakings in both industries. In the building industry it includes general building, plumbing and glazing, painting, paperhanging and decorating, joinery and carpentry, plastering, slating and tiling, etc. It also includes public works contracting, constructional engineering, installation of heating, ventilating and electrical equipment in buildings, and so on. All local authorities and public utility undertakings which have building or civil engineering departments or branches must register, but private firms, not themselves building or civil engineering undertakings, need not register in respect of a building maintenance branch unless the branch works for persons outside the main firm.

Forms, which are quite simple and require very few particulars, were obtainable from any local office of the Ministry of Labour from yesterday, August 21. They must be filled in and sent to the Secretary, Ministry of Works and Buildings, Sanctuary Buildings, 18, Great Smith-street, London, S.W.1, by September 1.

Before granting a certificate of registration, the Minister must satisfy himself that the terms and conditions of employment jointly agreed in the industries and any conditions as to hours of employment and Sunday work which the Minister may direct will be observed by the builder or contractor, but a provisional certificate may be granted before the Minister has satisfied himself on this point. In filling in the application form, the builder or contractor undertakes to observe these conditions.

Certificate of registration will be issued as soon as possible after receipt of the application by the Ministry of Works and Buildings. Anyone carrying on business after October 1 in building or civil engineering without holding a certificate is liable, on conviction, to fine, imprisonment, or both.

The following is the full text of the Regulation — Defence Regulation 56AB (S.R. & O. 1941, No. 1038) : —

REGISTRATION OF BUILDERS AND CIVIL ENGINEERING CONTRACTORS.

1. The object of the Regulation is to enable the Minister of Works and Buildings to make a comprehensive survey of the building and civil engineering industries, and to see that their resources are used to the best advantage in the national interest. Under the Regulation, no person may, after October 1, 1941, carry on business as a builder or civil engineering contractor unless he is registered by the Minister of Works and Buildings and holds a certificate of registration. This applies to all undertakings* engaged in the construction, alteration, repair, decoration or demolition of buildings, or any incidental activities; or in the construction, alteration, repair or demolition of works other than buildings or any incidental activities.

Anyone carrying on such a business after this date without being registered will be liable on conviction to fine, imprisonment, or both.

2. This means that all undertakings (with the exception mentioned in paragraph 3) engaged in the following and similar activities must be registered : General building; plumbing and glazing; painting, paperhanging and decorating; joinery and carpentry; plastering; slating and tiling; public works contracting; constructional engineering; the installation of heating, ventilating and electrical equipment in buildings.

This list is not comprehensive, and undertakings engaged in activities not mentioned here are not relieved of the obligation to register.

3. The exception is this : If an undertaking not itself a building or civil engineering contracting undertaking has a branch (for instance, the building maintenance department of a factory) engaged in any of the activities mentioned above, the branch need not be registered unless it carries out work wholly or mainly for persons outside the main undertaking. Local authorities or public utility undertakings which have building or civil engineering departments or branches must, however, register in all cases.

The requirement to register applies to employers and other persons carrying on undertakings, and *not to employees.*

4. Before issuing a certificate of registration, the Minister of Works must be satisfied that the terms and conditions of employment in the undertaking will be neither more nor less favourable than the terms and conditions jointly agreed in the industries, and that the undertaking will observe such conditions as to hours of employment (including Sunday work) as he may direct. (The conditions at present in operation are set out on the form of application for registration.) Applicants for registration must certify on the application form that these terms and conditions will be observed by the undertaking.

Before the Minister has satisfied himself as to these points, he may issue a provisional certificate of registration with the same effect as a certificate.

Either the provisional certificate or the certificate itself may be withdrawn if the Minister is not satisfied that these conditions are being observed.

5. In order to satisfy himself that these conditions are being observed, the authorised representative of the Minister may at any time inspect an undertaking or any of its activities.

6. If the holder of a certificate ceases to carry on business as a builder or civil engineering contractor, the Minister must be informed, and he may then withdraw the certificate.

7. The Minister may by Order require any persons employing labour in any of the activities described in Paragraph 1, whether or not they are required to register under the Regulation : (*a*) to keep such records, (*b*) to make such returns, (*c*) to produce such documents and furnish such information in regard to such activities as he may direct. Public notice will be given of any such Order.

8. Copies of the Regulation can be got (price 3d.) from H.M. Stationery Office at York House, Kingsway, London, W.C.2; 120, George-street, Edinburgh, 2; 25, York-street, Manchester, 1; 1, St. Andrew's-crescent, Cardiff; 80, Chichester-street, Belfast; or through any bookseller.

9. Further information can be obtained from a local office of the Ministry of Labour, or from the Ministry of Works and Buildings at the address below.

Applicants for registration should at once obtain the necessary forms (B.C.E. 2 and 3) from a local office of the Ministry of Labour and National Service, fill them in, and post them *not later than September 1, 1941*, to the Secretary (A.S. 63), Ministry of Works and Buildings, Sanctuary Buildings, 18, Great Smith-street, London, S.W.1.

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*For the purpose of the Regulation, the term "building undertaking" means an undertaking consisting wholly or mainly in the carrying on of any of the following activities :—

(*a*) the construction, alteration, repair, decoration or demolition of buildings;

(*b*) the carrying out, in conjunction with the carrying on of any such activities as are mentioned in sub-paragraph (*a*) of this paragraph, of any processes, operations or manufactures incidental to any of the said activities;

and the term "civil engineering contracting undertaking" means an undertaking consisting wholly or mainly in the carrying on of any of the following activities :—

(*a*) the construction, alteration, repair or demolition of docks, harbours, bridges, roads, viaducts, aqueducts, canals, inland navigations, pipe-lines, plant foundations, cooling towers and ponds, cable trenches, cableducts railways, aerodromes, sea defences, river works, piers, quays, wharves, reservoirs, filter beds, sewage works, sewers, tunnels, and gasholders, the erection of overhead line supports, and any works of a similar nature;

(*b*) the carrying out, in conjunction with the carrying on of any of the activities mentioned in sub-paragraph (*a*) of this paragraph, of any processes, operations or manufactures incidental to the carrying on of any of the said activities;

and these terms include any branch, department or other part of any organisation which is not itself either a building undertaking or a civil engineering contracting undertaking, if the branch, department, or part is wholly or mainly devoted to the carrying on of such activities.

OBITUARY

Arthur E. Heazell, F.R.I.B.A.

Mr. Arthur Ernest Heazell, whose death at the age of 77 is reported, was Nottingham's oldest practising architect. First as an articled pupil, and then as partner, he was associated with the firm of Heazell and Sons, of Nottingham, for more than 60 years. It was this firm that designed Church House, Parkrow; St. Martin's Church, Sherwood; and St. Margaret's, Aspley. For 40 years Mr. Heazell was Diocesan Surveyor of the Archdeaconry of Nottingham, and for many years he was secretary of the Nottingham and Derby Architectural Society, and had been its president. He was elected F.R.I.B.A. in 1905, and had served on the Council.

Rendell Davies, B.Sc.(Eng.), M.I.H.V.E.

The building industry itself as well as the specialist engineering services associated with building have suffered a severe loss in the death of Mr. Rendell Davies, B.Sc.(Eng.), M.I.H.V.E., who was accidentally drowned on a recent holiday in the Midlands.

Mr. Rendell Davies had been in practice as a consulting engineer in London for many years. He was a most active member of the Lifts and Escalators Installation Panel, and, as Chairman of the Drafting Sub-Committee of that Panel, played a leading part in the drafting and publication of the first Code of Practice for the Installation of Lifts and Escalators ever published in this country. At the time of his death he was engaged on the revision of this important Code.

Mr. Davies had the great ability of attracting the ablest of men around him, and had the practical help and good will of the Home Office, the London County Council, the other leading Local Authorities, and of the insurance companies in his work.

A correspondent writes : Mr. Davies was actively associated with the work of the British Standards Institution. He possessed a charming personality and the great gift of stimulating enthusiasm in all matters leading to the progress and betterment of the professional services associated with building. He was indeed typical of the new element in building represented by the consulting engineer. Both the professions and the industry itself have suffered a deep loss in his passing. This will be particularly felt by the Building Industries National Council.

INSTITUTE OF BUILDERS

EXAMINATION SUCCESSES.

In the recent examinations held by the Institute of Builders the following were successful :—

Licentiate Diploma.—G. D. Ault, Epsom Downs; S. C. Barber, Ilford; D. G. Blackford, Clane; F. N. J. Bond, London; C. W. J. Brookman, Wolverhampton; A. Cawrey, Leicester; R. E. Davenport, Greenford; A. J. Dietrich, London; P. F. Hodges, London; D. Pollock, Motherwell; E. Ravina, London; N. F. S. Ruscoe, Bedford; H. A. S. Sadler, London; W. S. Sherman, Farnborough; C. G. Smith, Birmingham; and A. G. Warren, Enfield.

Associate Diploma.—R. G. Salisbury, Leeds.

BUILDING CONTRACT DISPUTE

ARBITRATOR'S AWARD UPHELD.

Coe v. Collis and Sons, Ltd.

In an arbitration, proceeding under a building contract in the R.I.B.A. Form, 1931 Edition, Mr. George Coe, a building contractor, claimed balance of his final account from Messrs. J. Collis and Sons, Ltd., owners of a factory building erected by the claimant. Messrs. Collis counter-claimed for damages for delay and bad workmanship. The Arbitrator, MR. SYDNEY TATCHELL, F.R.I.B.A., gave his award in the form of a special case upholding the contentions of the claimant. On the hearing of the special case, the Arbitrator's award was affirmed by the Court. We take the following extracts from the Lord Chief Justice's judgment :—

The claimant and the respondents are respectively a firm of builders and a business firm who required the erection of a factory and some alterations to an existing factory, and they entered into a contract by which the claimant undertook to do the necessary work. A dispute arose, and the matter was referred to arbitration, and an award was made by the arbitrator in the form of a special case on a number of what were called preliminary issues.

The contract was dated February 15, 1937, and, as I have said, it was for the erection of a factory and alterations to an existing factory. It was a lump sum contract for the sum of £8,550. By the terms of the contract a date was fixed for completion—namely, August 30, 1937. By Clause 1 the contractor was to carry out the works in accordance with the contract, in accordance with the directions and to the reasonable satisfaction of the architect, and one of the matters particularly mentioned is the amending and making good of any defects under Clause 16 of the contract.

Clause 13 is what is generally referred to as a maintenance clause, the marginal note is "Defects after completion," and it requires the contractor to make good within a reasonable time after receipt of the architect's written instructions, at his own cost, any defects that appear within six months, and the architect might decide that these repairs should not be made good at the contractor's own cost.

By Clause 19 it was provided that, in certain events, damages for non-completion should be paid, and the damages were to be £20 per week for any period during which the works were to remain uncompleted, and the employer was given power to deduct the damages from any moneys due to the contractor.

Clause 20 provided for an extension of the time for completion of the work in a number of events, and Clause 22 provided that the employer might determine the contract in certain events, and Clause 23 provided that the contractor might determine the contract in certain events.

Now the works proceeded, and considerable payments were made to the builder amounting to something round about £7,000. Delays took place, but I have had no information as to the particular reason for the delays in the completion of the work. On March 10, 1938, a certificate was given by the architect appointed under the contract for a sum of £800. On the same day the architect wrote to the contractor: "Pursuant to Clause 20 of the contract, I write to inform you that I have extended your time for completion of the works to October 11, 1937," that is to say, to a date already then past. Also, on the same day, he wrote to the building owner: "With reference to Clause 19 of the above contract, I hereby certify that, in my opinion, the works ought reasonably to have been completed by October 11, 1937." On June 17 the architect gave a further certificate for £445, and by the form of the certificate was expressed to be "subject to penalty." That, no doubt, was intended to refer to the clause providing for liquidated damages.

Some time in June, 1938 (the claimant says on the 14th; the building owner, the respondent, says on the 27th) the works were completed. Those dates are taken from the pleadings. A letter was also on June 27 written by the building owner to the contractor saying that they had had an opportunity of going into the matter of further payments to the contractor, and they had a substantial claim against him for penalties for non-completion. They proposed to set that off against certificate No. 2, which was the last certificate that I have mentioned. They also said that the roof floors and area pavement had been in parts condemned by their architect, and they were asking the architect to let them know what steps were being taken to put this work in order. No payment was made in respect of the certificate for £440.

On November 29 a further certificate was given by the architect, again subject to penalty, for £200, and on the same day, November 29, the architect wrote to the contractor enclosing a schedule of work required to be done under Clause 13 of the contract, the maintenance clause. On December 2 the contractor wrote to the building owners giving notice under Condition 23 of the Conditions of Contract to pay him the sum of £445; that is in respect of the certificate which I have mentioned of June 17, 1938. Payment was not made. On the contrary, the building owners wrote on December 8 saying that they had nothing to add to the previous correspondence, and they would, if necessary, enforce their contract against the contractor.

The architect gave a further notice under Clause 13 on December 20 for certain works to be done; and on December 23 the contractor wrote a letter to the building owners in these terms: "Further to my letter of the 2nd instant, I hereby give you notice under Clause 23 of the contract dated February 15, 1937, that you having failed to pay the amount due on the architect's certificate No. 728 within the period named in the appendix to the contract, and thereafter for seven days after my written notice dated December 2 having failed to pay the amount due, I hereby determine the contract in accordance with the said clause, and claim the rights thereby given to me."

In those circumstances questions arose as to the position of the parties in view of the terms of Clause 23 of the contract. As I have said, the disputes which arose between the parties were referred to arbitration, and with a laudable desire to avoid expense, the parties agreed that certain preliminary issues should be considered by the arbitrator, and upon that consideration the award has been stated in the form of a special case.

The first point that arises is whether the contract was legally determined by the letter of December 23 in accordance with Clause 23. The respondents say it was not legally determined, their position being that they claimed to set off the liquidated and ascertained damages at the rate of £20 a week for delay in completion of the works against the certificates, and they say that nothing is owing under the certificates, and there was therefore nothing unpaid; and further, as I understand, the contractor was not in a position to determine the contract under Clause 23.

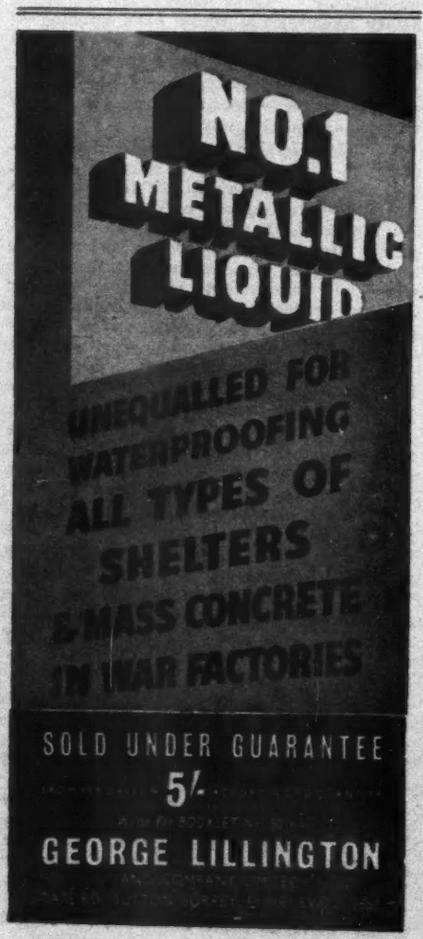
Upon that the question arises as to who is right in those contentions. The arbitrator finds in his award in these terms: "The architect failed to accord the claimant a proper extension of time in the terms of Condition 20 of the Conditions of Contract, and that accordingly the respondents at no time became entitled to liquidated damages under Condition 19 of the contract or to any other damages which they were entitled to set off against the sum due to the claimant under the certificate dated June 17, 1938; therefore the contract was properly and duly determined by the claimant on December 23, 1938."

The question first arises as to the proper interpretation of Clause 20 and Clause 19, which has to be considered in connection with Clause 20. Now, in my view, Clause 20 provides for an extension of time being given by the architect whenever he thinks proper and necessary, in consequence of delay to the works for one or other of the causes mentioned in Paragraph 20.

Mr. Garland [for the appellants] says that an extension of time must be made by the architect once for all, but I see nothing in the language of Clause 20 to support the view. It provides that "If, in the opinion of the architect, the works be delayed by *force majeure*," and then a number of other circumstances, "then in such case an architect shall make a fair and reasonable extension of time for completion of the works." Those last words seem to me in their natural meaning to require that the architect shall make —it is obligatory—a fair and reasonable extension of time if and whenever he thinks it proper to do so in consequence of the operation of one of the causes.

Now in this connection it is necessary to look at Clause 19, because Clause 19 provides as follows: "If the contractor fails to complete the works by the date stated in the Appendix or within any extended time under Clause 20 hereof and the architect certifies in writing that in his opinion the same ought reasonably so to have been completed, the contractor shall pay or allow to the employer the sum named and at the rate stated in the Appendix as liquidated and ascertained damages." Now that requires three things. It requires, first of all, failure to complete by the date stated in the Appendix—that is, August 30; it requires an extension of time, or it provides for an extension of time, which will postpone the date from August 30, 1937, to some time which the architect has extended it; and it also provides for a certificate in writing that the same—that is, the works—ought reasonably so to have been completed.

It is said that the architect did not make an order giving a new time, as I have already said, and that penalties never began to run, but so far as Clause 19 is concerned, it seems to me to require something more than a mere extension of time; it requires a certificate in writing that, in the architect's opinion, the works ought reasonably so to have been completed. Now the Arbitrator, as I understand, has taken the view which I think, on the mere construction of the words, is the right one: that so far as Clause 20 is concerned the architect is to make a fair and reasonable extension for completion of the works if and when



any of the causes mentioned in the article operate. So far as Clause 19 is concerned, he not only has to do that, if it is necessary, but he has to give a further certificate which will certify that the works ought to have been reasonably completed by the original date, or, in the event of extension, by the extended date. . . . I think that the Arbitrator came to a right view . . . that the contract was properly and duly determined under Clause 23 in view of the fact that a sum for which a certificate has been given was not paid after the seven days' notice required by the contract, and that disposes of the first point in the preliminary issues.

Now the contract, Clause 23—and this is a point which has given me a little trouble—provides that "When the contractor determines the contract, it shall be without prejudice to the accrued rights of either party, and then their respective rights and liabilities shall be as follows," and the rights and liabilities which are mentioned are that the contractor "may remove or shall remove from the site all his goods, machinery and plant, and he is to be paid by the employer the contract value of the works at the date," and some other items such as the course of removal.

Now what are "accrued rights" within the meaning of this clause? Is a mere claim for damages "accrued rights"? Is it an "accrued right" to call upon the builder to remedy the defects which have appeared? I notice that in the clause which provides that "without prejudice to the accrued rights their respective rights and liabilities shall be as follows." Now I think that it is not possible to say that a liability, if the liability would have existed on the footing that the contract is in force to make good defects, is an accrued right when the contract has been dissolved or determined under Clause 23. At best, these rights, if that is the proper word at all to use of them, to claim damages for failure to make good defects and to claim damages for delays in performance of the contract, are inchoate rights, and not accrued rights at all. . . . I think the clause, by providing for certain things which are called respective rights and liabilities when it reserved the accrued rights of either party, meant to protect or preserve the right of either party to receive payments or to take possession of the works in accordance with what had been done and completed under the contract while it was in force. When the contract has been determined, I think then the liability which previously existed to make good defects or to pay damages for delay in completing the works came to an end, and could not be described as "accrued rights" which had been preserved by Clause 23.

Now the Arbitrator appears to have reached that conclusion, because he says: "I further award and declare that none of the claims or reliefs claimed by the respondents in their counter-claim were rights accrued on December 23, 1938, and that accordingly they are not sustainable under Condition 23 of the Conditions of Contract." I agree with the Arbitrator in that finding, and I think, therefore, that his final award must stand; and I so determine.

Mr. H. G. Garland appeared for the Appellants (Respondents), and Mr. A. T. Miller, K.C., and Mr. E. Holroyd Pearce for the Respondent (Claimant).

BUILDINGS ILLUSTRATED

CENTRAL LIBRARY, NEW MALDEN.

Sub-contractors engaged on this work were: Structural steelwork, Edward Wood and Co., Ltd.; Sancroft brown facing bricks, Henry C. Parker and Co.; sandlime bricks, the Ightham Brick and Tile Co.; asphalt tanking to basement, the Neuchatel Asphalte Co., Ltd.; Mansfield stone kerb to forecourts, the "Gregory" Quarries, Ltd.; non-slip paving to forecourts, and slips to entrances, Brookes, Ltd.; reconstructed Portland stone, Broadmead Products Co.; "Paropa" roofing, Frassi, Ltd.; hollow tile floors, Attoo Blocks, Ltd.; concrete roof lights, Haywards, Ltd., and J. A. King and Co., Ltd.; cast-iron rainwater heads, Henry Hope and Sons, Ltd.; cast-lead rainwater pipes and heads, J. L. Emms; steel window-frames and doors, C. E. Welstead, Ltd.; steel main entrance doors and internal doors, laylights, and grating to area, Conrad Parlanti, Ltd.; heating and ventilating installation, J. H. Nicholson and Co., Ltd.; electrical installation, Johnson and Tanner, Ltd.; electric light fittings, Troughton and Young, Ltd.; electric light fittings to laylights, G. V. D. Illuminators, Ltd.; bulkhead lighting fittings, Holophane, Ltd.; electric clocks, Smith's English Clocks, Ltd.; joinery work, including all fitments, flush doors, shelving, tables, etc., Charles E. Aylard; silver-bronze handrail to main staircase, J. Starkie Gardner, Ltd.; W.I. balcony over main entrance and W.I. staircase balustrade to staff stairs, G. C. Harris; suspended ceilings, Honeywill and Stein, Ltd.; "Cullamix" tiles, British Art Tile Co., Ltd.; book lift, G. Brady and Co., Ltd.; ironmongery, W. N. Froy and Sons, Ltd.; projector-room shutters, the Hall Manufacturing and Supply Co., Ltd.; "Glazement" cement-glaze, Hoyle, Robson, Barnett and Co., Ltd.; "Dulux" paint and "Beldec" washable distemper, I.C.I. Paints, Ltd.; black-out blinds, Tidmarsh and Sons, Ltd., and Messrs. J. Avery and Co.; steel furniture, Pel, Ltd., and Steelchrome, Ltd.; cork tiles, paving sand and wall linings, Mundett Cork Products, Ltd.; vitreous tiles in main entrance hall, Carter and Co. (London), Ltd.; ornamental iron grilles, Delziel Engineering Co.; and photographs, Hide and Co., and Sydney W. Newbery.

NEW NURSES' HOME, ISOLATION HOSPITAL, LEICESTERSHIRE.

For this building (Messrs. Symington, Prince and Pike, FF.R.I.B.A., architects), the general contractors were Messrs. James Chapman and Son. Sub-contractors and suppliers included: United Tile Co., Ltd., bricks; Empire Stone Co., Ltd., stone; Richard's, Leicester, Ltd., structural steel; Helical Bar and Engineering Co., Ltd., Helicon fireproof floors; Setchell and Sons, Ltd., Old Delabole slates; Imperial Chemical Industries, Pioneer plaster blocks; Hollis Bros. and Co., Ltd., wood-block flooring; Croft Granite Brick and Concrete Co., Ltd., patent flooring and stairtreads; Maddock and Wright, central heating; J. H. Carver, Ltd., plumbing; J. Orton and Sons, electric wiring and electric heating; Troughton and Young, Ltd., electric light fixtures; Woodhouse and Co., sanitary fittings; R. Pochin and Sons, door furniture and window furniture; Crittall Manufacturing Co., Ltd., steel casements; G. T. Pick and Sons, metalwork; Craven Dunnill and Co., Ltd., tiling; J. and E. Hall, Ltd., lifts.

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EMERGENCY INQUIRY BUREAU

Questions from readers arising out of War-time difficulties and recent Emergency legislation will be answered by a special staff of contributors. Questions, which should be addressed to the Editor, should be accompanied by a stamped addressed envelope.

War Damage Act: Rating of Plant and Machinery.

SIR,—*Referring to the question and answer in your issue of July 4, dealing with what plant and machinery are to be included in the term "land" as defined in Sec. 95, War Damage Act, 1941, we learn on inquiry from the War Commission that "the question whether any item of plant and machinery is or is not rated" refers to plant and machinery which, though rateable, may, for some reason or other, have been omitted from rating.*

The further words ". . . or even rateable . . ." refer particularly to plant and machinery on a hereditament that is in itself not rateable.

This further elucidation of the question may interest some of your readers, as, to those not well acquainted with rating practice, the short statement made in your issue of July 4 may be somewhat difficult to understand. H. H. F. P.

A correspondent writes: The construction to be put upon paragraph (c) of the definition of land in Section 95 of the War Damage Act, 1941, is that all plant and machinery rateable, and which comes under the Plant and Machinery (Valuation of Rating) Order, 1927 (S.R. & O., 1927, No. 480) is to be treated as part of the land under the War Damage Act.

If it so happens that a rating authority has omitted to rate such machinery which is on rateable land, it must nevertheless be treated as part of the land under the Act of 1941.

So also if—as in the case of agricultural land which, under the Local Government Act, 1929, and the Agricultural Rates Act, 1929, is wholly derated, and industrial hereditaments and freight transport hereditaments, which under the Rating and Valuation (Apportionment) Act, 1928, and the Local Government Act, 1929, give certain relief from rating—there is plant and machinery coming within, and included in, the Order, all this, too, would be treated as part of the land for the purposes of the War Damage Act, 1941.

Government Service and Essential Work Order.

SIR,—*I was interested in the letter of your correspondent signing himself "Reader," published in your issue of August 1. The reply of the Ministry of Labour still leaves me in doubt as to whether a quantity surveyor employed by the Air Ministry is able to resign his appointment to take up work of a similar nature with another employer. Possibly there are many quantity surveyors who would be glad to have a clear answer to the question raised by "Reader."* PUZZLED.

In the course of a further reply the Ministry of Labour write as follows: "Unless a Government Department is scheduled under one of the Essential Work Orders there is nothing in the Defence Regulations to prevent a worker leaving that Department within the terms of his contract of service. Where, however, a worker in a Government Department is registered with this Ministry's Central Register, he is not submitted for other employment until it is clear that the employing Department is prepared to dispense with his services. In the case of the quantity surveyor which you quote in your letter, it is likely that the private employment to which it is desired to transfer would be in one of the undertakings covered by the Undertakings (Restriction on Engagement) Order, 1940. Such employment would have to be obtained through this Ministry, and the worker would be sent where there was the greatest need for his services."

WHAT IS A BUILDING?

By W. T. CRESWELL, K.C., Hon.A.R.I.B.A., A.S.I., etc.

The term "Building" does not appear to have been directly defined in any Statute or Statutory Rule, Order or Regulation; but it has been judicially defined from time to time in the Courts.

These definitions have been given mainly in cases brought under the London Building Acts, the Public Health Acts, and by-laws made thereunder; also the Rating Acts and certain local Acts.

"Building" was defined by Lord Esher in Moir *v.* Williams (1892), 1 Q.B. 270, as an inclosure of brick or stone covered by a roof. But in R. *v.* Gregory (1833), 5 B. & Ad., Park, J., said it did not necessarily include a wall; but, depending on circumstances, it may even include a reservoir. (See Maran *v.* Marsland (1909), 1 K.B. 744.)

In Stevens *v.* Gourley (1859), 7 C.B. (N.S.) 99, Byles, J., said that by "a building" is usually understood a structure of considerable size, and intended to be permanent or at least to endure for a considerable time. Under the Housing Acts "buildings" include huts, tents, caravans or other temporary or movable form of shelter used for human habitation and which have stood in the same enclosure for two years.

The following have also been held to be buildings :—

Holborn Viaduct.

An open shop with its front built on the foundation of an old wall and connected with the front of a house by a roof.

A bay window and also a bow window.

A church.

A glasshouse (under the Agricultural Rates Act, 1896).

An advertisement hoarding (within a restrictive covenant "not to erect buildings").

A trellis, 12 ft. high (within a restrictive covenant against buildings).

A water-wheel (as falling within the phrase "messuages and buildings").

A conservatory (within the Prescription Act, 1832).

A structure of wood intended to be used permanently as a shop.

A place with four walls, a roof and a door, used for keeping guano for garden use.

A wooden structure on wheels, 30 ft. long and 13 ft. high, fitted with rainwater pipes and with gas laid on, but without sanitary convenience, for use as a portable butcher's shop.

A substantial temporary wooden platform for carrying a crane.

A structure of wood and glass on a front main wall and used for exhibiting photographs.

A bandstand (within the open spaces Act, 1887).

A tunnel under a road connecting the lands on each side (within the Gas Works Clauses Act, 1847).

The following have been held *not* to be buildings :—

The masonry on the side of a canal.

Hustings put up for an election.

A hoarding from 13 to 19 ft. high, set up for purposes of advertisement round three sides of a piece of land. (It was held, also, that it was not a new building under the by-laws.)

The same within a covenant against erecting any building, but held to be a fence.

A boundary wall.

A screen erected on a burial ground to prevent newly erected houses acquiring a right of light.

A timber stack.

A conservatory at the side of, and leaning against, a house (under the Public Health Act, 1875).

A structure with a canvas roof surrounded by a canvas screen supported on poles which could be taken down without disturbing the ground.

A portable theatre of wood which was only erected a short time at each of one place after another.

A builder's movable pay-office of wood standing on wheels.

Wooden seats or tiers of wood fixable and moveable.

A temporary brick-kiln.

A temporary brick structure for storing tools.

In general, the meaning of "the erection of a new building" in the Public Health Acts and the London Building Acts is not limited to the erection of buildings for the first time, but covers the following also :—

(1) The re-erection, wholly or partly, of any building of which an outer wall is pulled down, or burnt down, to within 10 ft. of the surface of the ground adjoining the lowest storey of the building;

(2) The re-erection, wholly or partially, of any frame building so far pulled down, or burnt down, as to leave only the framework of the lowest storey;

(3) The roof-over of an open space between walls or buildings.

The question whether any building work constitutes a "new building" is a question for the Court. Though it is doubtful, as already shown, if new walls or hoardings or fences are new buildings. But two vans resting partly on blocks of wood and partly on a wall and connected to a building by a flue were held to constitute a new building. (See James *v.* Tudor (1912), 77 J.P. 130.)

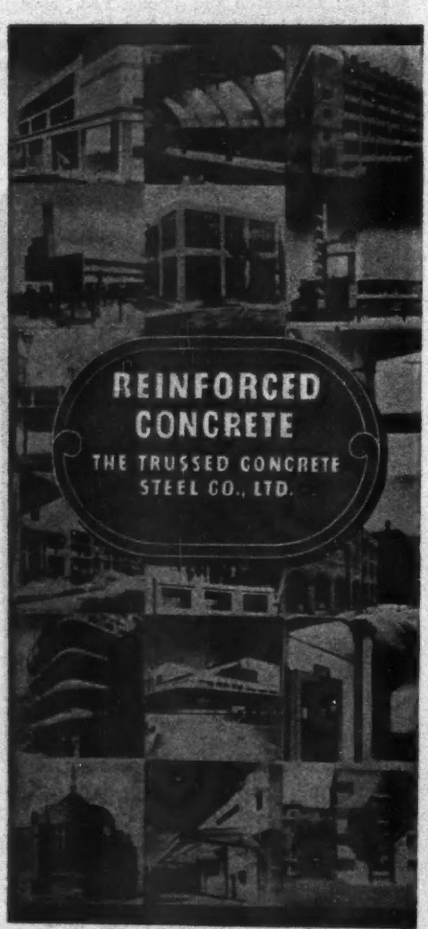
Also an old railway carriage may be a new building if its interior arrangements are altered so that it can be used as a dwelling. (See Hanrahan *v.* Leigh U.D.C. (1909), 2 K.B. 257.)

Single-Stack Fan Kiln.

The Forest Products Research Laboratory have issued from Princes Risborough, Bucks, an illustrated leaflet (No. 18, July, 1941) describing the construction of a single-stack kiln of the cross-shaft overhead fan variety.

Change of Address.

Aluminium Union, Ltd., have taken premises for the duration of the war at Grosvenor House (8th Floor), Park-lane, London, W.1. (Telephone : Grosvenor 4941.) There is no change at their Cobham office, the address of which is Fairmile Hatch, Cobham, Surrey (telephone : Cobham 249 and 2356).



4-458A

A.R.P. SCHEMES

PROVINCIAL.

Audenshaw.—U.D.C. to strengthen existing surface shelters. Plans by H. M. Doxey, Sur.

Bacup.—T.C. to carry out extensive improvements, including strengthening of buildings of wardens' posts. Plans by H. Guffogg, Boro' Sur.

Barrow-on-Soar.—R.D.C. received sanction to proceed with modified programme for communal shelters in rural area. Plans by W. Curtis, Sur.

Coventry.—T.C. approved: Erection of public shelters to accommodate 10,000 and a "camp" for 10,000 persons to be erected in rural areas. Plans by E. H. Ford, City Eng.; shelters to accommodate 5,000 to be completed within next six months; provision of canteens in 30 shelters is under consideration.

Lichfield. T.C. received approval of Regional Technical Adviser for erection of 12 50-person shelters. Plans by City Sur.

Lincolnshire (Kesteven Div.). — C.C. to erect two shelters and blast walls at Bourne Grammar School; erection of a wardens' post at Bourne. Plans by C. B. Metcalfe (F.), County Architect, Sleaford.

Llanfairfechan. — U.D.C. to erect public shelter on site to be selected. Plans by W. T. Ellis, Sur.

Maltby.—U.D.C. to erect shelters, Rotherham-rd. Plans by M. R. Jones, Sur.

Manchester.—T.C. approved plans for fire station to depot, Clarendon-rd. and Curzon-st., Chorlton-on-Medlock. Plans by H. C. Lamb, Chief Eng.

Middleton.—E.C. received approval of B.E. for heating and lighting of school shelters, at £1,331 15s., and for additional expenditure on shelters, at £160 18s. 3d. Plans by J. Pollard (L.), Boro' Architect.

Northamptonshire.—C.C. received approval of Regional Commissioner for shelter at the Isolation Hospital, at £232.

Northumberland.—J. W. Urpeth, Bedlington, has secured the contract for A.R.P. store at Kylins, Morpeth, for C.C.

Oldham. — A.R.P. Emergency Committee considering provision of canteen facilities in public shelters.—M.H. approved first-aid post at St. Ambrose Church, at £750, and an expenditure of £6,138 on eight first-aid posts. Plans by G. E. Hardy, Boro' Sur.

Rothwell. — U.D.C. to erect 20 48-person shelters. Plans by J. Miles, Sur.

Runcorn. — North-Western Regional Office approved scheme for electric lighting, at £3,630, and heating, at £3,371, of 352 surface shelters. Plans by A. J. King, Sur., Castle Park, Frodsham.

Stoke-on-Trent. — E.C. proposes improvement to school surface shelters, at £980.

Surrey.—C.C. submitted scheme to Ministry of Home Security for conversion of caves at Godstone into air raid shelters.—C.C. to strengthen school shelters, at £20,000.

Wallsend.—Shelters to be built at Rosehill lecture hall. Plans by A. Cheyne, County Architect, Mitford-rd. Schools, Morpeth.

Wakefield — T.C. have placed a contract with Walter Robb, Ltd., 16, Silver-st., Wakefield, for the installation of electric lighting in public shelters, at £7 19s. 6d. each. Plans by S. G. Wardley, City Architect.

West Kesteven. — R.D.C. placed contracts with H. E. Drury, at £427, and E. Bloodworth, at £223, for shelters. Plans by G. L. Robinson, Sur., 19, Watergate, Grantham.

Wigston.—U.D.C. to erect further shelters, strengthen and improve existing shelters. Plans by G. F. Stacey, Sur.

SCOTLAND.

Glasgow.—Plans in hand for shelters at Alexandria Parade school by the Architect, John MacNab, Education Offices, Bath-st, Glasgow.—Plan in hand for shelters at the Remand Home, Glasgow, the architect being Thomas Somers, Municipal Buildings.

Cement Prices for Minimum Load.

In the national interest with a view to general transport economy, especially the conservation of petrol, the Cement Marketing Co., Ltd., have decided, on and after August 18, 1941, to base minimum schedule prices for certain Portland cements on loads of 6 tons instead of 4 tons as heretofore. The premiums chargeable for loads of less than 6 tons will be at the rates which have previously applied to loads of less than 4 tons. Cements affected are "Blue Circle" Portland; "Ferrocrete" rapid-hardening; rapid-hardening red and buff "Colorcrete"; "Aquacrete" water-repellent; and "417."

CONTRACTS OPEN

For some contracts still open, but not included in this list, see previous issues. Those with an asterisk are advertised in this number. The dates at the head of paragraphs are those for the submission of tenders: a dagger (†) denotes closing date for applications; the name and address at the end refer to the person from whom particulars may be obtained.

BUILDING.

AUGUST 25.

Erith T.C.—Permanent repair of properties. J. H. Clayton, Boro. Eng. and Sur.

AUGUST 26.

Bournemouth C.B.—Extended first-aid repairs at 32 sites. Mr. W. L. Clowes, Boro. Eng. and Architect.

†**East Riding E.C.**—64 brick surface shelters. County Architect, County Hall, Beverley.

Esher U.D.C.—Sleeping quarters, Hinchley Wood. Sur. Dep. £2 2s.

***Penzance B.C.**—Erection of 24 communal shelters. Boro. Eng. and Sur.

Wellington R.D.C.—Conversion of a portion of farm into fire station, etc. J. B. Cooper, F., 177, Corporation-st., Birmingham. Dep. £2 2s.

AUGUST 27.

Doncaster C.B.—Community feeding kitchen, Sandall-pk. R. E. Ford, Estates Sur., 3, Priory-pl.

Morley T.C.—Works on various properties. Boro. Eng.

AUGUST 28.

Glamorgan C.C.—Various works at mid-Glamorgan County Hospital, Bridgend. County Architect, Glamorgan County Hall, Cardiff.

AUGUST 29.

Scunthorpe T.C.—Waterproofing "Anderson" shelters in cement concrete. W. Farrar, Boro. Eng. and Sur.

SEPTEMBER 4.

Leeds T.C.—Works on various properties. W. Jones, Director of Public Assistance, 11, South Parade.

Rochdale C.B.—Alterations and additions to first-aid post, Watkin-st. Boro. Sur.

SEPTEMBER 5.

East Barnet U.D.C. Construction of 18 surface shelters. C. M. Barnes, Eng. and Sur. Dep. £2 2s.

SEPTEMBER 6.

Newbury T.C.—Construction of pump-house and engine foundations. Boro. Sur. and Water Eng.

SEPTEMBER 11.

Stourbridge T.C.—Garage, etc., Birmingham-st. depot. G. N. Maynard, Boro. Eng. and Sur.

NO DATE.

Barnsley.—Demolition and site clearance work at Pitt Yard, Honeywell. W. T. Dunwell, 11, St. Wilfrid's-rd., Bessacarr, Doncaster.

Maidstone T.C.—Conversion of an existing air raid shelter into a gas cleansing station. John H. Hughes, Boro. Sur., Palace-ave.

PAINTING, ELECTRIC LIGHTING, HEATING, &c.

AUGUST 25.

Baildon U.D.C.—External painting of 30 houses in Grove housing estate. P. A. Watford, Sur.

AUGUST 26.

Mountain Ash U.D.C.—Scraping and painting gasholders. Eng. and Sur.

AUGUST 29.

Breconshire Standing Joint Committee.—External painting of police premises. H. C. W. Strickland, County Architect, Watton Offices, Brecon.

Middlesbrough T.C.—Electrical installations in trenches and of electric pumps. H. Haigh, Boro. Electrical Eng. Dep. £2 2s.

AUGUST 30.

Buckley U.D.C.—External painting of 20 houses. Sur.

SEPTEMBER 5.

Glyncorrwg U.D.C.—Painting 87 houses and one store. H. Walsh, Eng. and Sur. Dep. £1 1s.

SEPTEMBER 6.

Oldham C.B.—External painting Westwood Park Institution: G. E. Hardy, Boro. Eng. and Sur. Dep. £1 1s.

SEPTEMBER 9.

Downham R.D.C.—Painting 104 houses. H. J. Diver, Sur.

SEPTEMBER 13.

Middlesbrough C.B.—Exterior painting 963 houses and creosoting to front and back fences on Marton-gr., Whinney Banks, Acklam, Ayresome, Nile-st., and Laycock-st. housing estates. C. Gorman, Boro. Eng. Architect and Sur. Dep. £4 4s.

ENGINEERING, IRON AND STEEL.

AUGUST 25.

Luton T.C.—Four reinforced concrete reservoirs. F. Oliver, Assoc.M.Inst.C.E., Boro' Eng. and Sur. Dep. £2 2s.

AUGUST 26.

Bakewell U.D.C.—Construction of brick and concrete reservoir and for laying and jointing of approx. 300 lin. yds. of 3 in. cast-iron water main. Sur.

ROAD, SEWERAGE AND WATER WORKS.

AUGUST 25.

Rhayader R.D.C.—Supply and laying of about 160 yards of 6 in. and 4 in. asbestos cement water main, the construction of concrete and brick 50,000-gallon reservoir and filter, together with incidental works. R. J. Owen, Clerk of the Council.

Rutland C.C.—Laying and rolling of bituminous granite carpeting on approx. 39,433 sq. yds. of Great North-rd. County Sur., Catmose, Oakham.

AUGUST 27.

Tees Valley Water Board.—Provision and installation of ammoniation and chlorination apparatus. T. S. R. Winter, Acting General Manager and Eng., Water Board Offices, Corporation-rd., Middlesbrough.

AUGUST 28.

Normanton U.D.C.—Laying 400 yds. of 4 in. cast-iron water main. Sur. Dep. £2 2s.

AUGUST 30.

Ennerdale R.D.C.—Excavation, laying and jointing, filling and restoration of surface for approx. 1,400 yds. of 10-in. and 3,750 yds. of 9-in. asbestos cement water mains, including valves and specials. Eng. Dep. £2 2s.

SEPTEMBER 6.

Ealing T.C.—Construction of fire dams. C. W. Seddon, Boro. Eng. Dep. £1.

FEDERATED EMPLOYERS' INSURANCE ASSOCIATION LTD. ESTABLISHED 1904

The Leading Office for

Contract Guarantee Bonds

ALSO

FIRE
WORKMEN'S COMPENSATION
PUBLIC LIABILITY
MOTOR
ETC. ETC.

Head Office:
8 KING STREET, MANCHESTER, 2.
London Office:
23, Lawrence Lane, Cheapside, London, E.C.2.

NO DATE.

Long Preston Ings Drainage Association.—Work on the Banks of the River Ribble. John Heaton, Secretary, Lingmell, Long Preston.

PUBLIC APPOINTMENTS.

AUGUST 26.

Whitehaven T.C.—Temporary Architectural Assistant. Town Clerk, Whitehaven.

SEPTEMBER 5.

***Bootle C.B.**—Temporary Quantity Surveying Assistant. B.E. and S., Town Hall.

SEPTEMBER 8.

***London.**—The Polytechnic, Regent-st., W.1, Temporary full-time teachers of Architecture. Director of Education.

NEW COMPANIES

THE particulars quoted below have been compiled by Messrs. Jordan and Sons, Ltd., Company Registration Agents, of 116 and 117, Chancery-lane, W.C.2, from the documents available at the Companies Registry.

PREFABRICATED CONSTRUCTIONS, LTD. (368,417). Regd. July 29. 84, Grosvenor-street, W.1. Builders, reinforced concrete engineers, etc. Nominal capital, £1,000. Subs., W. G. Collins, 84, Grosvenor-street, W.1, and S. Kaufman, LL.M.

WILLIAMS & VOISEY, LTD. (368,456). Regd. July 30. Builders, contractors, etc. Nominal capital, £5,000. Dirs., J. F. S. Buckland, 158, Wellington Hill West, Westbury-on-Trym, Bristol, and T. W. Lewis.

L. G. STREET & CO., LTD. (368,497). Regd. August 1. Builders, contractors, etc. Nominal capital, £400. Permt. dirs., L. G. Street, 12, Lynette-street, Clapham, S.W.4, and H. E. Clements.

CASTWOOD CO., LTD. (368,535). Regd. August 5. To acquire formulæ concerned with the treatment of artificial wood, plastics and other substances, and to carry on the business of woodcrete manufacturers. Nominal capital, £5,000. L. M. Hammond, 24, Atherfold-road, S.W.9 (secretary).

DYER & PICKARD, LTD. (368,538). Regd. August 5. 36, Royal Exchange-chambers, City-square, Leeds, 1. Builders, contractors, etc. Nominal capital, £100.

THOMAS FISH & SONS, LTD. (368,573). Regd. August 6. 567, Woodborough-road, Mapperley, Nottingham. To take over the businesses of builders and contractors: (1) formerly carrier on by Geo. F. Fish, decd., and (2) carried on by S. Burdett and J. O. Palethorpe, both at Nottingham. Nominal capital, £8,000. Dir., S. Burdett, 14, Henley-rise, Nottingham.

GRAVELS ASSOCIATED, LTD. (368,479). Regd. August 1. North Bridge, Great North-road, Doncaster. Quarrymen, dealers in sand and gravel, etc. Nominal capital, £100. Dir., A. L. Boddington, 1-9, Ludgate-hill, E.C.4.

G. NORRIS & SONS (A. & E.), LTD. (368,582). Regd. August 7. 328, Stretford-road, Hulme, Manchester, 15. Builders, contractors, engineers, etc. Nominal capital, £500.

WILLIAM T. STUBBS & SONS, LTD. (368,595). Regd. August 7. 1, Woodford-avenue, Chigwell, Essex. Builders, etc. Nominal capital, £2,000.

T. & G. INVESTMENTS, LTD. (368,524). Regd. August 2. Builders, etc. Nominal capital, £100. Dir., L. J. Paice, 449, Hillcross-avenue, Morden, Surrey.

ALCOCK & BACKHOUSE, LTD. (368,551). Regd. August 6. Decorators, builders, etc. Nominal capital, £1,000. Sub., S. C. Backhouse, 187, Queen's-drive, Liverpool.

THOMAS FEATHER & CO. (DARLINGTON), LTD. (368,647). Regd. August 9. Builders, excavators, etc. Nominal capital, £10,000. Dir., T. E. Feather, Albion House, Greengates, Apperley Bridge.

East Monmouthshire Joint Planning Committee.

The second annual report of the East Monmouthshire Joint Planning Committee, 1940-41, just issued, records that satisfactory progress has been made in the preparation of planning proposals for the constituent authorities and that the Final Scheme for the Wye Valley is now with the Minister of Health, Mr. M. E. Taylor, A.M.T.P.I., A.R.I.B.A., is the Planning Officer.

RATES OF WAGES IN THE BUILDING TRADE

AS AND FROM 1st JUNE, 1941

[Every endeavour is made to ensure accuracy, but we cannot be responsible for errors]

	Crafts-men.	Lab-ourers.
Aberaeron	1/10½	1/5½
Aberdare	1/10½	1/5½
Abergavenny	1/10½	1/5½
Abingdon	1/9	1/4½
Accrington	1/10½	1/5½
Aldeburgh	1/7	1/3
Aldershot	1/9	1/4½
Alfreton	1/10½	1/5½
Alnwick	1/10	1/5½
Altrincham	1/10½	1/5½
Amble	1/10	1/5½
Amersham	1/9	1/4½
Ammanford	1/10½	1/5½
Andover	1/8½	1/4½
Ardingly	1/8½	1/4½
Arundel	1/8½	1/4½
Ascot	1/8½	1/4½
Ashby-de-la-Zouch	1/10½	1/5½
Ashford (Kent)	1/8½	1/4½
Ashford (Middlesex)	1/10½	1/5½
Ashington	1/10	1/5½
Ashtead	1/10½	1/5½
Ashton-under-Lyne	1/10½	1/5½
Aylesbury	1/8½	1/4½
Aylsham	1/7½	1/3½
Bagshot	1/8½	1/4½
Banbury	1/8½	1/4½
Barnsley	1/10½	1/5½
Barnstaple	1/8½	1/4½
Barrow-in-Furness	1/10½	1/5½
Barry	1/10½	1/5½
Basingstoke	1/8½	1/4½
Bath	1/10	1/5½
Batley	1/10½	1/5½
Beaconsfield	1/9	1/4½
Beccles	1/7	1/3
Bedford	1/10	1/5½
Berkhamsted	1/8½	1/4½
Berwick	1/10	1/5½
Beverley	1/10½	1/5½
Bexhill-on-Sea	1/9	1/4½
Bideford	1/8½	1/4½
Biggleswade	1/8½	1/4½
Billericay	1/8	1/3½
Birchington	1/8½	1/4½
Birkenhead	‡§2/0½	¶
Birmingham	†1/10½	1/5½
Bishop Auckland	1/10½	1/5½
Bishop's Stortford	1/9½	1/5
Blackburn	1/10½	1/5½
Blackpool	1/10½	1/5½
Blyth	1/10½	1/5½
Bognor Regis	1/8½	1/4½
Bolton	1/10½	1/5½
Bournemouth	1/9½	1/5
Bracknell	1/8½	1/4½
Bradford	1/10½	1/5½
Bradford-on-Avon	1/7½	1/3½
Braintree	1/8½	1/4½
Brentwood	1/10	1/5½
Bridgwater	1/9	1/4½
Bridlington	1/10	1/5½
Brighouse	1/10½	1/5½
Brighton	1/9½	1/5
Bristol	1/10½	1/5½
Broadstairs	1/8½	1/4½
Bromsgrove	1/10	1/5½
Buckley	1/10½	1/5½
Bungay	1/6½	1/2½
Burnham-on-Crouch	1/7	1/3
Burnley	1/10½	1/5½
Bursledon	1/10½	1/5½
Burton-on-Trent	1/10½	1/5½
Bury	1/10½	1/5½
Bury St. Edmunds	1/8	1/3½
Buxton	1/10	1/5½
Byfleet	1/9	1/4½
Cambridge	1/10½	1/5½
Canterbury	1/8½	1/4½
Cardiff	1/10½	1/5½
Carlisle	1/10½	1/5½
Carnforth	1/10½	1/5½
Castleford	1/10½	1/5½
Caterham	1/10½	1/5½
Chard	1/7½	1/3½
Chatham	1/9½	1/5
Chelmsford	1/10	1/5½
Cheltenham	1/9½	1/5
Chepstow	1/10	1/5½
Chertsey	1/9½	1/5
Chester	1/10½	1/5½
Chesterfield	1/10½	1/5½
Chichester	1/8½	1/4½
Chorley	1/10½	1/5½
Cirencester	1/8	1/3½
Clacton	1/8½	1/4½
Clevedon	1/10½	1/5½
Cliftonville	1/10½	1/5½
Cobham (Surrey)	1/8½	1/5
Colchester	1/10	1/5½
Colwyn Bay	1/9½	1/5
Congleton	1/10	1/5½
Coventry	1/10½	1/5½
Cranbrook	1/8½	1/4½
Cranleigh	1/8½	1/4½
Crawley	1/8½	1/4½
Crewe	1/10	1/5½
Cromer	1/7½	1/3½
Crowborough	1/8½	1/4½
Cuckfield	1/8½	1/4½
Darlington	1/10½	1/5½
Darwen	1/10½	1/5½
Daventry	1/9	1/4½
Deal	1/8½	1/4½
Denbigh	1/9½	1/5
Derby	1/10½	1/5½
Devizes	1/7½	1/3½
Dewsbury	1/10½	1/5½
Didcot	1/8½	1/4½
Diss	1/7	1/3
Doncaster	1/10½	1/5½
Dorchester	1/8	1/3½
Dorking	1/9	1/4½
Dover	1/8½	1/4½
Dovercourt	1/8½	1/4½
Driffield	1/9	1/4½
Droitwich	1/10	1/5½
Dudley	1/10½	1/5½
Dunstable	1/9	1/4½
Durham City	1/10½	1/5½
Eastbourne	1/9½	1/5
E. Glam. (Mon. Val.)	1/10½	1/5½
East Grinstead	1/8½	1/4½
Edenbridge	1/8½	1/4½
Ely	1/7½	1/3½
Epping	1/10½	1/5½
Exeter	1/10	1/5½
Exmouth	1/9	1/4½
Fakenham	1/7½	1/3½
Falmouth	1/9	1/4½
Fareham	1/9½	1/5
Faversham	1/8½	1/4½
Felixstowe	1/9½	1/5
Filey	1/9	1/4½
Fleetwood	1/10½	1/5½
Flint	1/10½	1/5½
Folkestone	1/8½	1/4½
Frinton-on-Sea	1/8½	1/4½
Frome	1/7½	1/3½
Gainsborough	1/9½	1/5
Gateshead	1/10½	1/5½
Gillingham (Kent)	1/8½	1/5
Glossop	1/10½	1/5½
Gloucester	1/10	1/5½
Godalming	1/8½	1/4½
Goole	1/10½	1/5½
Gosport	1/10	1/5½
Grantham	1/9½	1/5
Gravesend	1/10	1/5½
Great Yarmouth	1/8½	1/4½
Grimsby	1/10½	1/5½
Guildford	1/8½	1/4½
Guisborough	1/9	1/4½
Halifax	1/10½	1/5½
Hanley	1/10½	1/5½
Harpenden	1/9½	1/5
Harrogate	1/10½	1/5½
Hartlepools	1/10½	1/5½
Harwich	1/8½	1/4½
Haslemere	1/8½	1/4½
Hastings	1/8½	1/4½
Hatfield	1/10	1/5½
Haywards Heath	1/8½	1/4½
Hednesford	1/10	1/5½
Hemel Hempstead	1/9½	1/5
Henley-on-Thames	1/8½	1/4½
Hereford	1/8½	1/4½
Herne Bay	1/8½	1/4½
Hertford	1/10	1/5½
Heysham	1/10½	1/5½
Hitchin	1/9½	1/5
Hoddesdon	1/10	1/5½
Holt (Norfolk)	1/7	1/3
Horley	1/8½	1/4½
Horsham	1/8½	1/4½
Horwich	1/10½	1/5½
Huddersfield	1/10½	1/5½
Hull	1/10½	1/5½
Hunstanton	1/7½	1/3½
Huntingdon	1/8	1/3½
Ilfracombe	1/8½	1/4
Ingatestone	1/9	1/4½
Ipswich	1/10	1/5½
Isle of Thanet	1/8½	1/4½
Isle of Wight	1/8	1/3½
Keighley	1/10½	1/5½
Kenilworth	1/10½	1/5½
Kettering	1/10½	1/5½
Kidderminster	1/10	1/5½
King's Lynn	1/8½	1/4½
Kirkham	1/10½	1/5½
Knowle	1/10	1/5½
Lancaster	1/10½	1/5½
Leamington	1/10½	1/5½
Leatherhead	1/9½	1/5
Leeds	1/10½	1/5½
Leicester	1/10½	1/5½
Leighton Buzzard	1/7½	1/3½
Letchworth	1/9½	1/5
Lewes	1/8½	1/4½
Lichfield	1/9½	1/5
Lincoln	1/10½	1/5½
Littlehampton	1/8½	1/4½
Liverpool	‡§2/0½	¶
Llandudno	1/9½	1/5
Llanelly	1/10½	1/5½
London—		
12m. radius	*2/0	1/6½
12-15 m. radius	*1/11½	1/6½
Long Eaton	1/10½	1/5½
Longton	1/10½	1/5½
Loughborough	1/10½	1/5½
Louth	1/9	1/4½
Lowestoft	1/8½	1/4½
Luton	1/10	1/5½
Macclesfield	1/10	1/5½
Maidenhead	1/9½	1/5
Maidstone	1/9	1/4½
Malvern	1/9	1/4½
Manchester	1/10½	1/5½
Manningtree	1/7½	1/3½
Mansfield	1/10½	1/5½
March	1/7½	1/3½
Margate	1/8½	1/4½
Market Harborough	1/9½	1/5
Matlock	1/9	1/4½
Melton Constable	1/7	1/3
Melton Mowbray	1/9½	1/5
Merthyr	1/10½	1/5½
Middlesbrough	1/10½	1/5½
Middleton	1/10½	1/5½
Middlewich	1/10	1/5½
Milford Haven	1/9	1/4½
Morecambe	1/10½	1/5½
Morley	1/10½	1/5½
Mundesley	1/7½	1/3½
Nantwich	1/10	1/5½
Nelson	1/10½	1/5½
Newark-on-Trent	1/10	1/5½
Newbury	1/8½	1/4½
Newcastle-on-Tyne	1/10½	1/5½
Newcastle-u.-Lyme	1/10½	1/5½
New Forest	1/8½	1/4½
Newmarket	1/8½	1/4½
Newport, Mon.	1/10½	1/5½
Newport Pagnell	1/8½	1/4½
Northampton	1/10½	1/5½
Norwich	1/10½	1/5½
Nottingham	1/10½	1/5½
Nuneaton	1/10½	1/5½
Oakham	1/9	1/4½
Oldham	1/10½	1/5½
Ormskirk	1/10½	1/5½
Oxford	1/10	1/5½
Oxted	1/9	1/4½
Paignton	1/10	1/5½
Peterborough	1/10	1/5½
Plymouth	1/10½	1/5½
Pontefract	1/10½	1/5½
Pontypridd	1/10½	1/5½
Port Talbot	1/10½	1/5½
Portsmouth	1/10	1/5½
Preston	1/10½	1/5½
Pulborough	1/8½	1/4½
Ramsgate	1/8½	1/4½
Reading	1/10	1/5½
Redditch	1/10	1/5½
Redhill	1/9	1/4½
Ripon	1/9	1/4½
Rochdale	1/10½	1/5½
Rochester	1/9½	1/5
Rugby	1/10½	1/5½
St. Albans	1/10	1/5½
St. Helens	1/10½	1/5½
St. Neots	1/8	1/3½
Saffron Walden	1/7½	1/3½
Salisbury City	1/8	1/3½
Salisbury Plain	1/9½	1/5
Sawbridgeworth	1/9	1/4½
Saxmundham	1/7	1/3
Scarborough	1/10	1/5½
Scunthorpe	1/10½	1/5½
Selby	1/10½	1/5½
Sevenoaks	1/9	1/4½
Sheerness	1/8½	1/4½
Sheffield	1/10½	1/5½
Shipley	1/10½	1/5½
Shoeburyness	1/10	1/5½
Shoreham	1/9½	1/5
Shrewsbury	1/10	1/5½
Sittingbourne	1/8½	1/4½
Skegness	1/9½	1/5
Sleaford	1/9	1/4½
Slough	1/9½	1/5
Southampton	1/10	1/5½
Southend-on-Sea	1/10	1/5½
Southport	1/10½	1/5½
South Shields	1/10½	1/5½
Spalding	1/8½	1/4½
Stafford	1/10	1/5½
Staines	1/9½	1/5
Stamford	1/9½	1/5
Stevenage	1/9½	1/5
Stockport	1/10½	1/5½
Stockton-on-Tees	1/10½	1/5½
Stoke-on-Trent	1/10½	1/5½
Stourbridge	1/10½	1/5½
Stourport	1/10	1/5½
Stowmarket	1/7½	1/3½
Stratford-on-Avon	1/9½	1/5
Stroud	1/9½	1/5
Sunderland	1/10½	1/5½
Sutton Coldfield	1/10½	1/5½
Swaffham	1/7	1/3
Swanage	1/8½	1/4½
Swansea	1/10½	1/5½
Swindon	1/9	1/4½
Tamworth	1/10	1/5½
Taunton	1/9	1/4½
Tenterden	1/8½	1/4½
Thames Haven	1/10½	1/5½
Thetford	1/8	1/3½
Thorpe Bay	1/10	1/5½
Todmorden	1/10½	1/5½
Tonbridge	1/9	1/4½
Torquay	1/10	1/5½
Totnes	1/8½	1/4½
Trowbridge	1/7½	1/3½
Truro	1/8	1/3½
Tunbridge Wells	1/9	1/4½
Uppingham	1/9	1/4½
Uttoxeter	1/9	1/4½
Wakefield	1/10½	1/5½
Walsall	1/10½	1/5½
Waltham	1/10½	1/5½
Walton-on-Naze	1/8½	1/4½
Ware	1/10	1/5½
Warminster	1/7½	1/3½
Warrington	1/10½	1/5½
Warwick	1/10½	1/5½
Wellington R.D.	1/10	1/5½
Welwyn	1/9½	1/5
Welwyn Gar. City	1/10½	1/5½
Wells (Norfolk)	1/7	1/3
West Bromwich	1/10½	1/5½
Westcliff-on-Sea	1/10	1/5½
Weston-super-Mare	1/9½	1/5
Weybridge	1/9½	1/5
Weymouth	1/8½	1/4½
Whitby	1/9½	1/5
Whitstable	1/8½	1/4½
Widnes	1/10½	1/5½
Wigan	1/10½	1/5½
Wigton	1/9	1/4½
Willington	1/10½	1/5½
Wilmslow	1/10½	1/5½
Winchester	1/9	1/4½
Windermere	1/9	1/4½
Windsor	1/9½	1/5
Wisbech	1/8	1/3½
Witham	1/8½	1/4½
Woking	1/9	1/4½
Wokingham	1/8½	1/4½
Wolverhampton	1/10½	1/5½
Woodbridge	1/8	1/3½
Worcester	1/10	1/5½
Workington	1/9	1/4½
Worksop	1/10	1/5½
Worthing	1/8½	1/4½
Wrexham	1/10	1/5½
Wroxham	1/8	1/3½
Wycombe	1/9½	1/5
Wymondham	1/7½	1 3½
Yeovil	1/9	1/4½
York	1/10½	1/5½

* Painters 1d. less than other Craftsmen. † Plus 2d. per working day. ‡ Plasterers 2/1.
¶ Tradesman's Labourers, 1/6½. Navvies and General Labourers, 1/6½.
§ Joiners, Plumbers, Bricklayers, Tilers and Masons receive 2/- per week or 4d. per day Tool Money.
NOTE.—Carpenters and Joiners in all Towns and Districts (other than Birkenhead and Liverpool) receive 2d. per day Tool Allowance.

For Building Trade Wages in Scotland, see page 180.

PRICES CURRENT OF MATERIALS*

Note: Owing to the exceptional circumstances which prevail at the present time prices of materials should be confirmed by inquiry.
The prices of soft woods are for cash on delivery.
At present linseed oil and genuine spirits of turpentine can only be supplied in cans in small quantities.

BRICKS, &c.

The price for Stock Bricks has been altered to minimum price at works for full lorry loads. Sittingbourne district. A quotation for cartage should be obtained as the haulage question is difficult.

	£ s. d.
First Hard Stocks ..... per 1,000	54 5 6
Second Hard Stocks ..... "	3 18 6
Mild Stocks ..... "	2 5 6
Single Rough Stocks ..... "	2 19 6
Third Common Stocks ..... "	2 10 0

	King's Cross Station per 1,000.	To sites in W.C. District. per 1,000
2½ in. Phorpres. A discount of 6d. 1,000 only monthly account.	s. d.	s. d.
Pressed	51 9	58 3
Keyed	53 9	60 3
Single Bullnose	71 9	78 3
Rustics	71 9	78 3
Whites	72 3	78 3
White Midhurst Best selected (delivered London site)	6 s. d. 5 10 0	
Best blue Pressed Stocks. (London Stns.)	10 2 9	
Do. Bullnose (London Stns.)	10 13 0	
Blue Wire Cuts (London Stns.)	8 19 6	
Best Stourbridge Fire Brick (London Stns.):—		
2½ in. 10 0 0	9 in.	12 0 0

GLAZED BRICKS. (London Stns.)

Best White Ivory and Salt Glazed	D'ble Str'tch'rs ..	38 10 0	
	D'ble Headers ..	33 10 0	
Stretcher 23 0 0	One sided two ends	37 10 0	
Headers 27 10 0	Two sides & one end	38 10 0	
Quoins, Bullnose and 4½ in. Flats 34 10 0	Splays and Squints	35 0 0	

Second Quality, £2 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours. Hard Glaze, £5 10s. extra over white.

PARTITION SLABS.

Delivered London Area.

"PHORPRES" HOLLOW PARTITION BLOCKS.

2" per yd. sup.	2 3	3" per yd. sup.	2 9
2½" " "	2 6	4" " "	3 1

CLINKER CONCRETE.

2" per yd. sup.	1 9	3" per yd. sup.	2 6
2½" " "	2 1	4" " "	3 4

CRANHAM TERRA COTTA.

Size 12 x 9 x 2" per yd. super	2 6
Size 12 x 9 x 2½ " "	2 9
Size 12 x 9 x 3" " "	3 3
Size 12 x 9 x 4" " "	3 7

Plus 2d. for smooth one side, and 4d. for smooth both sides.

Delivered: Free on site London area.

HEMPSTEAD—KEYED TWO SIDES.

12" x 9" x 2"	2 6	12" x 9" x 3"	3 0
12" x 9" x 2½"	2 9	12" x 9" 4"	3 9

Per yard super d/d. Free on site, London.

SAND.

Thames Ballast	9 6 per yd.	delivered 2 miles radius Paddington.
Pit Ballast	9 0 " "	
Pit Sand	11 6 " "	
Washed Sand	13 0 " "	
¼ in. Shingle	10 0 " "	
¾ in. Broken Brick	15 6 " "	
Pan Breese	9 6 " "	

CEMENT.

Best British Portland Cements. Standard Specification.

	£ s. d.
delivered London Area.	
6 ton loads and upwards site. ..... Per ton	2 9 6
1 ton to 6 tons site	2 12 6
Alongside Vauxhall in 80 ton lots	2 7 0
"Ferrocrete" Rapid Hardening Cement—	
6 ton loads and upwards site	2 15 6
1 ton to 6 tons site	2 18 6
Alongside Vauxhall in 80 ton lots	2 13 0

Stored in Reserved Bins at works. 1/6 per ton extra.

"Aquacrete" Water Repellent, "Blue Circle" cement, 30/- per ton extra on ordinary "Blue Circle" prices.

"Colorcrete" Nos. 1 and 2. Coloured Rapid Hardening Portland Cement, in 6-ton lots .. 3 19 6

"Colorcrete" not rapid hardening, according to colour, from £7 to £15 10s. per ton.

"Snowcrete" White Portland Cement 10 5 0

"417" Cement (Ultra Rapid Hardening) Delivered site London Area in 6 ton lots and upwards ..... per ton 3 9 6

Plus packages at current prices.

Super Cement (Waterproof), *bags extra* 2 19 6

NOTE.—Paper bags will be charged at the rate of 6/- nett per ton. Jute sacks charged 1s. 9d. nett each and 1/6 nett each allowed if returned to works within two weeks, in good condition.

Carriage will be paid by makers on returned empty jute sacks.

Roman Cement	£8 0	Keene's Cement, White	£7 0 0
Parian Cement	7 0	" Pink	6 10 0

Cementone Colours for cement according to tints per cwt. from £2 16s. 0d.

PLASTER.

	£ s. d.		£ s. d.
Coarse, Pink	4 0 0	Stoptite, Coarse ..	4 5 6
" White ..	4 7 6	" Finish ..	4 13 6
Pioneer	4 5 0		

Above prices for 4-ton loads and over London Area.

Best Ground Lime		Grey Stone Lime	2 14 6
Lias Lime	2 0 6	Chalk Lime	2 14 6
Granite Chippings	1 15 0	Hair per cwt. ..	2 7 6

NOTE.—Sacks are charged 1s. 9d. each, and credited 1s. 6d., if returned in good condition within three months, carriage paid.

Stourbridge Fireclay in paper bags, £2 12 6 in 6-ton lots at railway depot.

STONE.

BATH STONE.—Delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube ..... s. d. 3 3½

BERE STONE—RANDOM BLOCK—

	s. d.
Free on rail at Seaton Station. . per ft. cube	2 3
Delivered free on rail Nine Elms, S.R.	3 1½

Selected approximate size one way, 1d. per cubic ft. extra, selected approximately three sizes or for special work, 3d. per cubic ft. extra.

PORTLAND STONE—

Brown Whitbed, in random blocks of 30 ft. average, delivered in railway trucks at Nine Elms, S. Rly., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R., per ft. cube	4 7
Do. do. delivered on road waggons as above stations, per ft. cube	4 7
White basebed, 2d. per ft. cube extra.	

NOTE.—1d. per ft. cube extra for every ft. over 20 ft. average and ½d. beyond 30 ft.

HORTON-WOOD STONE—

F.O.B. Quarries, Wirksworth, Derbyshire, Random blocks from 10 ft. and over F.ft.cb.	13 2
Sawn two sides	25 11
Sawn three or four sides	31 11

YORK STONE, BLUE—*Robin Hood Quality.*

Delivered at any Goods Station, London.

6 in. sawn two sides landings to sizes (under 50 ft. super) ..... per ft. super	5 6
6 in. rubbed two sides, ditto .... "	6 3
3 in. sawn two sides slabs (random sizes) ..... "	2 7
2 in. to 2½ in. sawn one side slabs (random sizes) (paving) ..... "	1 8½
1½ in. to 2 in. ditto ..... "	1 4½

HARD YORK—

Delivered at any Goods Station, London.	
Scrappled random blocks. ..... per ft. cube	6 10
6 in. sawn two sides landings to sizes (under 50 ft. super) ..... per ft. super	5 7½
6 in. rubbed two sides, ditto .... "	6 9
4 in. sawn two sides slabs (random sizes) ..... "	3 5
3 in. ditto ditto ..... "	2 8
2 in. self-faced random flags ..... per yd. super	6 9

CAST STONE.

Delivered in London area in full van loads, per ft. cube: Plain, 7s. 6d. Moulded, 8s. 6d.

Small section cills and copings, 11s.

HARD WOOD.

1 INCH AND UP THICK.

Average price for prime quality.				Foot cube. £ s. d.
Dry English Wainscot Billets ..	16	0	to	0 18 0
Dry Slavonian Billet Wainscot	17	0	to	1 0 0
Dry Cuba Mahogany logs ..	21	0	to	1 4 0
Square-edged Honduras Mahogany ..		..		0 16 6
Log Cut Honduras Mahogany ..		..		0 17 6
American Figured Oak ..		..		0 13 0
American Plain Oak ..		..		0 12 6
Jap. Figured Oak ..		..		0 13 0
Jap. Plain Oak ..		..		0 12 6
Teak ..		..		0 15 6
American Whitewood ..		..		0 12 6
African Whitewood ..		..		0 8 0
African Mahogany ..		..		0 11 0
Australian Walnut ..		..		0 19 0
Australian Silky Oak ..		..		0 12 6
Best Scotch glue per cwt. ..		..		5 0 0
Liquid glue, per gallon ..		..		1 2 0

Having Secured the Contract— What about the Steel Scaffolding?

TUBULAR

—S & C—

SCAFFOLDING

For the lowest Prices apply to the Oldest Firm in the Scaffolding Trade.

STEPHENS & CARTER LTD.

The British Steel Scaffolding Co.

731-761, HARROW RD., N.W.10.

Telephone No. Ladbroke 1391 (5 lines).

SOFT WOOD.

MERCHANTABLE BRITISH COLUMBIAN PINE.

	Minimum. £ s. d.	Maximum. £ s. d.
Scantlings in imported sizes, 2 in. by 3 in. to 4 in. by 11 in.	43 10 0	53 0 0

PLANED BOARDS.

PRIME CLEAR BRITISH COLUMBIAN PINE.

	For standard. £ s. d.
1 in. by 11 in. } 1 in. by 9 in. }	67 10 0

	For square. s. d.
1 in. plain edge flooring	53 0
1¼ in. ditto	66 6
1 in. tongued and grooved	53 0
1¼ in. ditto	66 6

MATCHING.

	Per square. s. d.
6 in.	37 6
7 in.	43 9
8 in.	55 0

SLATES.

First quality slates from Penrhyn or Portmadoc, carriage paid in full truck loads to London Rate Station. Per 1,000 actual.

	£ s. d.		£ s. d.
24 by 12	45 5 0	18 by 10	24 0 0
22 by 12	37 17 6	18 by 9	22 12 6
22 by 11	34 2 6	16 by 10	21 10 0
20 by 12	33 0 0	16 by 8	16 12 6
20 by 10	30 5 0		

TILES.

Delivered at London rate stations in full truck loads of not less than 6 tons..... Per 1,000 f.o.r. London

Best machine-made tiles from Broseley or Staffordshire district.	£5 6 0
Ditto hand-made ditto	6 7 6
Ornamental ditto	0 14 0
Hip and valley tiles { Hand-made	0 12 9
(per dozen) { Machine-made	0 12 3

METALS.

JOISTS, GIRDERS, &c., TO LONDON STATION PER TON—

R.S. Joists, cut and fitted	£22 13 0
Plain Compound Girders	25 0 0
" Stanchions	27 10 0
In Roof Work	32 10 0

NOTE.—These prices are for standard pieces and not special pieces of an awkward nature.

MILD STEEL ROUNDS.—To London Stations, per ton.

Diameter.	£ s. d.	Diameter.	£ s. d.
¼ in.	22 5 0	⅞ in. to ½ in.	20 15 0
⅝ in.	21 5 0	⅝ in. to 2½ in. ..	20 5 0

WROUGHT TUBES AND FITTINGS.

Deliveries from works.

Deliveries from London stock further 21% gross.

	Fittings. 10/17 Tubes. ½"/8" %	Tubulars. ¼"/8" %	and 19/24 %	Flanges. ½"/2" %	2½"/8" %
Light weight ..	51½	—	47½	51	57½
Heavy weight	44	44	39½	41	46½
Galv. lightweight	40½	—	38½	39½	46½
Galv. heavyweight	31	31	31	29½	41

Tubes and tubulars sizes ½"/1" inclusive, charged extra of 5% less gross.

Fittings. Figs. 25/34 5% less gross discounts.

Terms.—Nett cash end of month following date of invoice. Carriage paid on lots of £10 nett value and over.

C.I. HALF-ROUND GUTTERS—London Prices ex Works, per yd. in 6 ft. lengths.

	Gutters.	Nozzels.	Stop ends.
3 in.	1/5	1/1½	4½d.
3½ in.	1/6½	1/3½	4½d.
4 in.	1/8½	1/5	6½d.
4½ in.	1/7½	1/7½	8d.
5 in.	1/11	1/9	8½d.

O.G. GUTTERS.

3 in.	1/3½	1/6½	4½d.
3½ in.	2/0½	1/6½	6½d.
4 in.	2/0½	1/7½	7½d.
4½ in.	2/1½	1/10½	8½d.
5 in.	2/7½	2/1½	9½d.

RAIN WATER PIPES.

Per yd. in 6 ft.	Pipe.	Bends.	Branches. Stock angles.
2 in.	2/1½	1/5	2/1
2½ in.	2/3½	1/7½	2/5½
3 in.	2/7½	2/0½	3/0½
3½ in.	3/1½	2/5	3/6
4 in.	3/7	2/10½	4/2½

NETT PRICES.

Tonnage allowance—4-ton lots, 5 per cent.
2-ton lots, 2½ per cent.

L.C.C. COATED SOIL PIPES—London Prices, ex Stock.

Per yd. in 6 ft.	Pipe	Bends.	Branches.
2 in.	2/6½	2/5½	2/6½
2½ in.	4/2½	2/9	3/9½
3 in.	4/6½	3/0½	4/6
3½ in.	4/7½	3/9½	5/3
4 in.	5/0½	4/2½	6/0½

L.C.C. COATED DRAIN PIPE.

	Pipe.	Bends.	Branches.
3 in. per yd. in 9 ft.	5/5	6/3	9/11
cwt. qr. lbs.			
4 in. 1 1 20.	7/11	7/1	12/0
5 in. 1 2 22.	9/7	12/9	19/3
6 in. 2 0 6	11/6	14/8	25/6

Gaskin, 75/- per cwt.

* The information given on this page has been specially compiled for THE BUILDER, and is copyright. The aim in this list is to give, as far as possible, the average prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information. Prices are subject to 2½ per cent. cash discount.

PRICES CURRENT OF MATERIALS—(cont.)

	Per ton loads in London. £ s. d.
IRON.—Staffordshire Crown, Marchant quality	18 7 6
IRON.—Staffordshire Marked Bars	19 7 6
Mild Steel Bars	19 15 0
Mild Steel Hoops	21 10 0
Ex Merchant's Stock, per ton (two-ton lots).	
Soft Steel Sheets, C.R. and C.A.—	
20 gauge	24 17 6
24 gauge	25 2 6
26 gauge	25 17 6
Galvanized Corrugated Sheets, 6 ft. to 9 ft.—	
20 gauge	27 0 0
24 gauge	27 10 0
26 gauge	28 15 0
Galvanized Flat Sheets, C.R. and C.A.—	
20 gauge	28 10 0
24 gauge	29 0 0
26 gauge	30 5 0
	Per ton. £ s. d.
Cut Nails, 3 in. and up	28 10 0

ASS. NETT.

MEDAL WINDOWS.—Standard sizes, suitable for complete houses, including all fittings, painting two coats, and delivery to job, average price about 1s. 4d. to 1s. 7d. per foot super.

COPPER.

Seamless copper tubes (basis)	per lb.	1/3
Strong sheet	"	1/8
Thin sheet	"	1/7
Copper nails	"	1/6
" wire	"	1/6

PLUMBERS' BRASS WORK.

Delivered in London.
Stamped by Met. Water Board.

CROWN HEAD S.D. BIB COCKS FOR IRON. EASY CLEAN.

½ in.	¾ in.
54/-	63/- per doz.

CHROMIUM PLATED TOILET S.D. BIB COCKS FOR IRON. EASY CLEAN.

½ in.	¾ in.
60/-	66/- per doz.

S.D. STOP COCKS FOR IRON.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
37/6	45/-	67/-	102/-	126/-	180/- per doz.

S.D.S. COCKS WITH TWO UNIONS FOR LEAD.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
42/-	75/6	120/-	228/-	300/-	468/- per doz.

DOUBLE NUT BOILER SCREWS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
1/10	5/9	15/9	27/3	44/-	62/6 per doz.

HEAVY CROTCH BALL VALVES. SCREW IRON.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.
66/-	72/-	120/-	204/-	300/- per doz.

CAPS AND SCREWS.

½ in.	¾ in.	2 in.	3 in.	3½ in.	4 in.
10/6	12/9	19/3	54/-	66/-	85/- per doz.

BRASS SLEEVES.

½ in.	¾ in.	2 in.	3 in.	3½ in.	4 in.
9/9	12/6	22/6	35/-	42/- per doz.	

DRAWN LEAD TRAPS WITH BRASS CLEANING SCREWS.

	1¼ in.	1½ in.	2 in.	3 in.
6 lb. Lead P...	29/-	36/-	54/-	93/- per doz.
6 lb. Lead S..	36/-	42/-	67/-	120/- "

SOLDER.—Plumbers, 1/5. Tinmen's, 1/3. Blow pipe, 1/10 per lb.

PAINTS, &c.

		£ s. d.
Raw Linseed Oil, in drums	per gallon	0 5 4
Boiled Linseed Oil, in drums	"	0 5 7
Turpentine, in drums (10 gals.)	"	0 7 5
Genuine Ground English White Lead, per ton (In not less than 5-cwt. casks).		62 0 0
Extra for 1-cwt. kegs over 5-cwt. casks is 2/0 cwt.		
GENUINE WHITE LEAD PAINT— "Father Thames," "Nine Elms," "Park," "Superman," "St. Paul's," "Morganwyte," "Polaco," "J" Brand, and other best brands (in 14-lb. tins) not less than 5-cwt. lots, per ton delivered		86 0 0
Red Lead, Dry (packages extra)	per ton	53 0 0
Best Linseed Oil Putty (1 ton lots)	per cwt.	0 17 1½
Size, XD quality	,,	0 3 6

Turpentine substitute can be obtained and prices vary according to the quality from 2/- gallon upwards.

		£ s. d.
SHOWCHEM CEMENT PAINT	per cwt.	2 16 0
C.M.C. CAMOUFLAGE PAINT	"	2 16 0

VARNISHES, &c.

		Per gallon.
Oak Varnish	Outside	0 16 0
Fine do.	"	0 18 0
Fine Copal	"	1 0 0
Pale Copal	"	1 2 0
Pale Opal Carriage	"	1 6 0
Best do. do.	"	1 14 0
Floor Varnish	Inside	1 0 0
Fine Pale Paper	"	1 0 0
Fine Copal Cabinet	"	1 4 0
Fine Copal Flatting	"	1 2 0
Hard Drying Oak	"	1 0 0
Fine Hard Drying Oak	"	1 1 6
Fine Copal Varnish	"	1 2 6
Pale do.	"	1 14 0
Best do.	"	1 4 6
Best Japan Gold Size		1 14 6
Best Black Japan		0 12 0
Oak and Mahogany Stain (water)		0 14 0
Brunswick Black		0 9 6
Berlin Black		0 18 0
Knotting (patent)		0 17 0
French and Brush Polish		0 14 0
Liquid Dryers in Terebene		0 11 0
Cuirass Black Enamel		0 9 0

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.

ORDINARY GLAZING QUALITY (O.Q.) AND SELECTED GLAZING QUALITY (S.Q.).

PER FOOT SUPER.

In sizes not exceeding 50 in. long or 48 in. wide or 1750 united inches.

	O.Q.	S.Q.
15 oz. to 200 ft. cases	2½d.	2¾d.
24 oz. „ 200 ft. „	3½d.	4d.
26 oz. „ 200 ft. „	3¾d.	4¼d.
32 oz. „ 200 ft. „	4¼d.	6¼d.
24 oz. „ 300 ft. „	3½d.	3¾d.
26 oz. „ 300 ft. „	3¾d.	4¼d.
32 oz. „ 300 ft. „	6¼d.	6¼d.
15 oz. Obscured Sheet		5½d.
24 oz. Obscured Sheet		6¼d.
Fluted, 21 oz.		9d.
Enamelled, 15 oz.		5¼d.
„ 24 oz.		6¼d.

Extra price according to size and substance for squares cut from stock.

ENGLISH ROLLED PLATE AND FIGURED CATHEDRAL, ETC., IN CUT SIZES.

Over 500 ft. super of all kinds.

	Per ft.
Rolled plate, ¼ in.	5½d.
Rough cast double rolled, ¼ in.	6¼d.
Rough cast double rolled, ⅜ in.	6¼d.
Figured rolled, and Cathedral, white.	6¼d.
Figured rolled and Cathedral, tinted	9¼d.
Rolled Sheet	6d.
Reeded, Broad Reeded, Cross Reeded and Chevron Reeded, ¼ in. thick	6 10½

Rolled plate is the same price as rough cast double rolled.

	Per ft. s. d.
Wire Rolled, ¼ in. thick	0 9½
Wired Cast, ¼ in. thick	0 9½
Georgian Wired Cast	0 10
"Calorex" Sheet, 21 oz.	2 6
„ „ 32 oz.	4 0
„ Cast, ¼ in. thick	0 10
„ „ ⅜ in. thick	1 0
„ „ ½ in. thick	1 2
Non Actinic Glass, ¼ in. thick	0 9½
„ „ „ ⅜ in. thick	1 0
„ „ „ ½ in. thick	1 2

"VITA" GLASS.

	Per ft. s. d.
"Vita" Plate Glass, about ⅛ thick	5 0
To 7 ft. super	5 0
Over 7 ft. super	7 6
"Vita" Sheet Glass, about 18/20 oz.	3 0
Cathedral "Vita" Glass:	
¼ in. thickness	2 0
⅜ in. „	3 0
⅛ in. Georgian Wired "Vita" Glass	3 6

LEAD, &c.

(Delivered in London.)	Per ton. £ s. d.
LEAD.—Sheet, English, 4 lb. and up	34 10 0
Pipe in coils	34 0 0
Soil pipe	39 10 0
Compo pipe	41 5 0

NOTE.—Country delivery, 20/- per ton extra, lots under 3 cwt. 4/- per cwt. extra and over 3 cwt. and under 5 cwt., 2/6 per cwt. extra. Cut to sizes, 4/- per cwt. extra.

Old lead, ex London area, at Mills, per ton £18 0 0

BUILDING TRADE WAGES IN SCOTLAND

Following are grade rates authorised by the Scottish N.J.C. from June 1. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur.

Grade Classification	A	A¹	A²	A³	B	B¹
Craftsmen	1/11	1/10½	1/10	1/9½	1/9	1/8½
Labourers	1/5½	1/5½	1/4½	1/4½	1/4	1/3½

Aberdeen	A	Dumfriesshire	A²	Inverness	*	Perthshire	A¹
Ayrshire	A	Dundee	A	Inverurie	A¹	Peterhead	A¹
Banff	B	Dunoon	A	Kincardineshire	A²	Renfrewshire	A
Berwickshire	A²	East Fife	A	Kinross-shire	A	Rothesay	A
Bridge of Allan	A	East Lothian	A	Lanarkshire	A	Roxburghshire	A¹
Broughty Ferry	A	Edinburgh	A	Midlothian	A	St. Andrews	A
Clackmannanshire	A	Fifeshire	A	Monifieth	A	Selkirkshire	A¹
Doune	A	Forfarshire	A²	Moray and Nairn	B	Stewartry	A¹
Dunblane	A	Glasgow	A	Newport	A	Stirlingshire	A
Dumbartonshire	A	Greenock	A	Peebleshire	A²	Stornoway	A¹
Dumfries	A¹	Hamilton	A	Perth	A	Tayport	A
						West Lothian	A

* This town has its own rates: Masons, 1/8½; Carpenters, 1/8½; Slaters, 1/8½; Plumbers, 1/9; Plasterers, 1/9½ but 1/10 is paid owing to the scarcity at present; Painters, 1/8½ and Labourers, 1/4.

The information given in this table is copyright. Rates of wages in England and Wales are given on page 178.

THE SCOTTISH BUILDER

NEW BUILDINGS

DUMBARTON.—BUILDING.—C.C. to carry out repairs to schools at £9,000. Joseph Weeks, 18, Park Circus, Glasgow, Architect.

FALKIRK. — CINEMA RECONSTRUCTION.—Dean of Guild Court has granted warrant to Camelon Picture House Co., Ltd., to repair and renovate the burnt-out Ritz Picture House, Camelon.

FIFESHIRE.—KITCHEN.—C.C. to construct a new feeding kitchen, etc., for the Wemyss Area of the County. George Sandilands, Architect, County Buildings, Cupar.

GLASGOW.—CANTEEN. — Plans prepared for new Canteen for D. and W. Henderson, at Castlebank-st. Thomas Cordiner, Architect, 251, West George-st.

GLASGOW. BUILDING.—Plans prepared for alterations and additions to offices for Wordie and Co., Ltd., 129, Buchanan-st. Architects, James Monro and Son, 307, West George-st. — Plans prepared for canteen at Ferry-rd., Govan-rd., for A. and J. Inglis, Ltd. James Taylor, 220, West Regent-st., Architect.

GLASGOW.—BUILDING. — Plans prepared for Govan offices for the Corporation. Thomas Somers, Municipal-bldgs., Architect.

JOHNSTONE.—HOSPITAL.—The Corporation proposes new public hospital. William Mitchell, Architect and Engineer, 1, Municipal Buildings, Collier-st.

RENFREW.—BUILDING. — Plans prepared for canteen for Babcock and Wilcox, Ltd., the Architect being T. Cordiner, 251, West George-st., Glasgow.

B.S. Specifications.

The steel industry has just effected a far-reaching rationalisation to which effect has been given by the British Standards Institution issuing a new schedule of wrought steels, "En" series (B.S. 970). This covers 58 steels and supersedes a number of steel specifications in the automobile series. With the specification is published a report of the T.A.C. describing the steels and giving information about their characteristics. Copies of these publications, price 5s. 5d. and 8s. respectively, post free, are obtainable from 28, Victoria-street, London, S.W.1.

Other Specifications recently issued are:—

B.S. 384.—Hard Drawn Phosphor Bronze Wire for General Engineering Purposes. (Price 2s. 3d. post free.)

B.S. 968-1941.—War Emergency B.S.S. for High Tensile (Fusion) Welding Quality Structural Steel for Bridges, etc., and General Building Construction. (Price 2s. 3d. post free.)

B.S. for Photo-Electric Devices for the Detection of Incendiary Bombs (BS/ARP 60-1941). (Price 6d., 8d. post free.)

CURRENT AND PROPOSED NEW BUILDINGS

Accrington.—T.C. approved plans for adaptation of "Ritz" ballroom, Church-st., for British Restaurant. Plans by H. Sanderson, Boro' Sur.

Ashton-under-Lyne. — T.C. approved plans: Alterations to Alger Mill, Cedar-st., for J. A. Pattreiouex, Ltd.; additions, Newman-st., J. C. Carison, Ltd.; canteen and stores, Blandford-st., R. Whiffen, Ltd.—E.C. propose erection of switch-house and battery-room to works. Plans by Lindley and Gibson, architects, Market-av.

Banbury.—R.D.C. approved: Temporary storage sheds, Hook Norton; hostel at Bodicote.

Bishop Auckland. — U.D.C. approved scheme for a three-bay fire station and 16 firemen's houses. Plans by F. L. White, Sur. and Architect.—U.D.C. to extend cemetery, etc., at £648. Plans by F. L. White, Sur.

Broomhill.—Canteens to be erected at Broomhill and Chevington Drift Collieries, Northumberland.

Bury.—T.C. submitted scheme to B.E. for adaptation of premises for communal feeding centre. Plans by J. Chadwick, Boro' Eng.

Clay Cross.—U.D.C. propose conversion of premises, Market-st., into British Restaurant. Plans by W. A. T. Lynam, Sur.

Corby.—U.D.C. propose additions to fire station. Plans by D. W. Greaves, Sur.

Coventry. — Health Committee to convert Foleshill-rd. day nursery as training school. —Witton Lodge, Stokes Green, to be acquired for day nursery.—Transport Committee to remove tram lines and repair roads, at £20,725.—T.C. to undertake repairs to houses.

Darlington.—T.C. approved plans: Extension to premises, Barton-st.; R. Stephenson and Hawthorn, Ltd., works latrines, Springfield-rd.; alteration to premises, Bondgate, for Hetherington's Stores; alterations to premises, Russell-st., for The Lily Laundry; extensions to offices, Neasham-rd., for J. Tinsley, Ltd.; canteen for Whessoe Foundry, Sir John Burnet, Tait and Lorne, architects.

Dartmouth.—T.C. considering erection of new mortuary at Longcross cemetery.

Dewsbury. — T.C. propose erection of day nursery at Huddersfield-rd. and Hebble-st., Ravensthorpe; alterations to day nursery, Eightlands-rd. Plans by M. H. Forward, Boro' Architect.

Dukinfield. — T.C. propose rebuilding cleansing depot, Charles-st. Plans by E. N. Stannion, Boro' Sur.

Eccles.—T.C. approved plans: Extensions to offices, Ellesmere Foundry, Patricroft, for Sir W. H. Bailey and Co., Ltd.

Felling-on-Tyne.—U.D.C. to carry out improvements at Coldwell-la., at £200.

Gateshead.—T.C. propose British Restaurant at Redheugh Bridge-rd., at £746.—Modified scheme for extending Saltwell Cemetery, at £4,450, has been prepared by F. H. Patterson, Boro' Eng.—T.C. to apply to Ministry of Works for sanction to proceed with plan for adapting premises in Park-rd. as a central transport depot, at £2,500. Plans by Boro' Eng.—Boro' Eng. prepared plans for alterations and additions to Bensham Hospital. Scheme to be forwarded to M.H. for consideration.

Gateshead. — T.C. approved: Canteen, Newall-ter., Dunston, for Emerson Walker, Ltd.; reconditioning premises, Bank-rd., for Sanderson Bros., Ltd.; alterations to "The Crawshay Inn," East-st., for Calders (Newcastle), Ltd.

Grimsby. — E.C. propose gymnasium, changing rooms and shower baths at youth centre, Victoria-st., at £800. Plans by J. V. Oldfield, Boro' Sur.

Holmfirth.—U.D.C. propose conversion of premises at Holme Valley for British Restaurant. Plans by H. Parkinson, Sur.

Jarrow.—T.C. to proceed with scheme for completion of 20 houses.

Kesteven. — E.C. to complete Hereward school, Bourne, at £3,000. Plans by C. B. Metcalfe (F.), County Architect, County-bldgs., Sleaford.

Kingston-on-Thames.—Surrey C.C. to provide kitchen at Technical College, at £259.

Lancashire.—P.A.C. propose extensions to mortuary at Fylde Institution, Kirkham, at £470.

Manchester.—T.C. approved: loading-way to works, Tipping-st., Ardwick; rebuilding copper-house, for Cornbrook Brewery Co., Ltd. Plans by R. G. Ryman, "Hillcrest," Carshalton Beeches, Surrey.

Middleton.—T.C. approved: Additions to "Jolly Butcher" Inn, Bowlee, for Cornbrook Brewery Co., Ltd., Manchester.

Morley.—T.C. to adapt premises for communal feeding centres. Plans by F. Turner, Boro' Sur.

Newcastle-on-Tyne. — City Council to demolish premises in Fisher-st., Low Walker. —City Council to consider scheme for providing hostels.

Northumberland. — C.C. to proceed with land drainage scheme, at £1,400.

Northumberland.—C.C. approved estimates for repairs to Preston Hospital, North Shields. Plans by D. M. O'Herhily, Boro' Eng., North Shields.—C.C. to provide rest centre accommodation for 10,000. Plans by W. W. Tasker, Mitford-rd. school, Morpeth, County Architect.

Nuneaton.—T.C. to adapt the Queen's-rd. schools for communal feeding centre, at £1,453. Plans by R. C. Moon, Boro' Sur.

Reigate. — Improvement scheme to be carried out to Wallace Brook, at £1,955, for Surrey C.C.

Rochdale.—T.C. approved plans for erection of temporary school buildings for Catholic Authorities.

Smethwick.—T.C. approved: Extensions to bakery, Waterloo-rd., for S. R. Shephard; additions to works, Smethwick Drop Forgings, Ltd.

Stockport. — T.C. to convert premises in Princes-st. for British Restaurant; premises to be adapted in town's centre for day nursery. Plans by W. F. Gardner, Boro' Eng.

Stourport.—U.D.C. propose redecoration of houses, Park-cres. L. H. Poole, Sur.

Surrey.—C.C. to provide a cafeteria at Netherne hospital. Cost £740.

Swinton and Pendlebury.—T.C. to acquire premises for conversion for communal feeding centre. Plans by A. Cordwell, Boro' Sur.

Tipton.—Midland Electric Corporation to erect sub-station.

Todmorden. — T.C. approved: Alterations and additions to Jubilee Mills; conversion of Liberal Club buildings as hostel, for Rowntree and Co., Ltd.

Wakefield. — Crigglestone Working Men's Club propose internal painting of club buildings; Crigglestone Industrial and Provident Society, Ltd., propose painting central premises and cottages at Painthorpe and the branch shop at Durkar.

Wallsend.—T.C. propose communal feeding centre near New Winning. Plans by J. A. Blench, Boro' Eng.

Warrington. — Electricity Commissioners approve provision of sub-stations and extensions of mains, etc., at £4,475; T.C. to requisition land for erection of houses.

Wednesday.—T.C. to construct two water storage reservoirs. Plans by A. Booth, Boro' Sur.

Whitby. — U.D.C. approved alterations to Ruswarp Mill.

Wolverhampton.—T.C. approved: Alterations and additions to works. Plans by Dallas and Lloyd, 45, Newhall-st., Birmingham.

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York.—T.C. preparing plans for emergency feeding centres at five points.—T.C. approved: additions to Society of Friends' Mount school, Dalton-ter., for Board of Governors.

TENDERS

The Editor welcomes authentic information for this feature from architects, surveyors or contractors. Items should reach 4, Catherine-street, Aldwych, W.C.2. not later than Tuesday morning.

Tenders for A.R.P. work will be found under "A.R.P. Schemes."

* *Denotes accepted.*
† *Denotes provisionally accepted.*
‡ *Denotes recommended for acceptance.*
§ *Denotes accepted subject to modification.*
¶ *Denotes accepted by H.M. Government departments.*

Alsager.—Excavation of trenches for the laying of public services, for U.D.C. H. V. Lynam, Eng.:—

T. S. Huxley, Malpas ... £1,480 8 9
*Wm. Mulcaster & Co., Ltd., Haslington, near Crewe ... 1,338 14 8

Ashton-under-Lyne.—Supply of two copper cylinders in connection with domestic hot-water supply system at Darnton House Institution, for Lancs. P.A.C.: *Baxendale & Co., Ltd., Thomas-st., Manchester.

Atherton.—Supply and laying of dressing for road surfaces, for U.D.C. Frank L. Boydell, A.M.I.C.E., Sur.: *Asphaltic Roadways, Ltd., 22-24, Booth-st., Manchester.

Birkenhead.—Alterations and additions to police station, for T.C. B. Robinson, Boro. Sur.: *Battye & Jones, Chester-rd., Ellesmere Port, Ches., £2,420.

Billingham-on-Tees.—Repairs to gutters, etc., to houses on Belasis estate, for U.D.C.: *G. R. Howd, Middlesbrough.

Dukinfield T.C.—Exterior painting of 70 houses for T.C. E. N. Hanion, Sur. *Thomas Acton, Higher Openshaw, Manchester.

Dunston-on-Tyne.—Canteen for Redheugh Iron and Steel Co., Ltd. *Hopper, Dunston-on-Tyne.

Gateshead.—Paving work in Cobden-st. and King Edward-pl., for T.C.: *Direct labour, £264.

Gateshead.—Repairs and decoration at Bensham hospital, for T.C.: *Elliott Bros., Newcastle-on-Tyne, £138.

Gateshead.—Work at new hospital. *Gibson Bros., Whitley Bay.

Gateshead.—Extensions to factory, Team Valley Trading Estate. L. J. Couves & Partner, Westfield-ave., Gosforth, architects. *Direct labour.

Glasgow.—Painting, etc., work at schools. John McNab, City and County of Glasgow Education Architect, Bath-st., Glasgow: St. Joseph's infant school, *J. & J. Grant, Ltd., Glasgow, £327; Camden-st. school, *A. Peebles, Pollokshields, £424; St. Joseph's girls' school, *J. G. Sanderson, Ltd., Hillhead, £362; Abbotsford school, *T. C. Watson, Glasgow, £624; Woodside school, *MacLean & Spiers, Ltd., Glasgow, £1,196; Langside school, *W. McKerracher, Pollokshields, £639.

Halesowen.—Construction of (1) static water supply weir at Church-la.; (2) 15,000-gall. static water-tank at Long-la. library; (3) 250,000-gall. water storage basin on B.T.H.'s land, for T. C. G. Spurr, Boro. Sur.: (1) *Byng Bros., Woodman-rd., £54; (2) *C. Burkes, Belle Vue, £197; (3) *Housing, Ltd., Station-rd., Blackheath, Birmingham, £845.

Horsham.—Strutting and erection of blast walls, for U.D.C. C. G. Atkins, Sur.: *Rowland Bros., East-st., Horsham. (Schedule.)

¶London (Air Ministry).—Contracts placed to the value of £500 or over for the week ended August 9:—

Building work.—Harry Neal, Ltd., Northwood; J. Mowlem & Co., Ltd., London; John Howard & Co., Ltd., Blunsdon, near Swindon.

Civil engineering work.—Fitzpatrick & Son (Contractors), Ltd., London.

Construction work.—J. Gerrard & Sons, Ltd., Swinton.

General maintenance work.—G. & J. Gregory, Caernarvon; J. Cryer & Sons, Ltd., Fleetwood; D. C. Stewart, Aberdeen; G. M. Pearson & Son, Ltd., Durham; and Sherfield Bros., Farnham.

¶**London (War Dept.).**—Contracts placed for week ended August 9 :—

Yorks.—Temporary camps, Thos. Feather & Co., Ltd., Six-la. ends, Idle, Bradford; and J. Alma Jordan, Turdor-hse., Westella-rd., Kirk Ella, Yorks.

Yorks.—Miscellaneous works, J. B. Brooke & Sons, Ltd., 264, Manchester-rd., Huddersfield.

Derby.—Hutting (erection), Harris Bros. (Mapehay), Ltd., Marehay, Derby.

Leics.—Miscellaneous work, Bradshaw Bros. (Contractors), Ltd., 214, Blackbird-rd., Leicester.

Berks.—Miscellaneous works, R. G. Francis & Co., Ltd., Somerset-hse., High-st., Ascot, Berks.

Middx.—Miscellaneous work, Arbro, Ltd., Malpas-rd., Brockley, S.E.4; Wm. F. Rees, Ltd., 39, Victoria-st., London, S.W.1; and Richard Crittall & Co., Ltd., Bush House, W.C.2.

London.—Miscellaneous works, Hunter & Clark, Ltd., Plough-terr., Battersea, S.W.11.

Kent.—Miscellaneous work, Chittenden & Simmons, Ltd., Ditton-pl., Larkfield, Maidstone, Kent.

Co. Antrim.—Miscellaneous work, H. Taggart, Church-st., Ballymoney, Co. Antrim.

Co. Down.—Hutting (erection), R. J. Campbell (London), Ltd., 33, Scottish Provident-bldgs., Belfast; R. Cullen & Sons, Church-st., Portadown, Co. Armagh; and Henry Laverty & Sons (Belfast), Ltd., 12-14, Cambridge-st., Belfast.

Long Horsley.—Land-workers' hostel. P. L. Browne, Son & Harding, Pearl-bldgs., Newcastle, architects. *R. Carse & Son, Oldgate, Morpeth.

Manchester.—Conveniences in Naples-st. and Style-st., for Baxendale & Co., Ltd. : *W. Makin, 3, Lumb-la., Oldham.

Manchester.—Trailer pump house to Mills, Worsley-st. and Egerton-st., Hulme, for W. Sutcliffe & Sons, Ltd. : *Normanton's, Ltd., Chorlton-on-Medlock, Manchester.

Mansfield.—Extensions to County P.A.C. Institution for Notts C.C. E. W. Roberts, County Architect, Shirehall, Nottingham : *C. H. Hill & Sons, Ltd., Victoria-st., Mansfield, £2,380.

Merionethshire.—Carrying out improvements to the main river, embankments and sluices, for the Rivers Catchment Board. Sir Evan Jones, Festiniog, Eng. A. H. Couser, Kenilworth, £2,994 15s. 1d.; G. E. Smethurst, Penrhyndeudraeth, £3,081 4s. 5d.; *Davies Bros., Barmouth, £2,795 2s. 3d.

Middleton.—Adaptation of Providence school, Market-pl., for British Restaurant, for T.C. J. Pollard, Boro. Architect : *Direct Labour Dept.

North Shields.—Repairs to Rex cinema. E. M. Lawson, Barras-bldgs., Barras Bridge, Newcastle, architect. *W. Norman, 3, Westlane, Chester-le-Street, Durham.

Northumberland.—Three farm-workers' hostels. Marshall, Tweedy & Bourne, Grainger House, Blackett-st., Newcastle, architects. *Middlemiss Bros., Stepney Bank, Newcastle.

Northumberland.—For erection of hostel. *H. Kindred, Rosevale, Sunniside, Whickham, near Gateshead.

Northumberland.—Hostel at Thropton. E. M. Lawson, Barras-bldgs. Barras Bridge, Newcastle, architect. *W. Norman, 3, Westla., Chester-le-Street, Co. Durham.

Ponteland.—Land-workers' hostel. *Middlemiss Bros., Stepney Banks, Newcastle.

Portmadoc.—Dismantling railway track from Portmadoc to Dinas, for Welsh Highland Railway : *George Cohen, Sons and Co., Ltd., Stanningley, near Leeds.

Scarborough.—Painting of Valley Bridge, for T.C. H. V. Overfield, Boro. and Water Eng. *J. Dampney, Britannic-works, Newcastle-on-Tyne.

Sunderland.—Repair and replacement of spouts at Cherry Knowle hospital, for T.C. : *Watson & Coates, Middlesbrough, £197.

Sunderland.—Minor alterations at Town Hall : *Direct labour.

Wakefield.—Installation of electric lighting in Technical College workshops, for T.C. S. G. Wardley, City Architect : *H. Goodyear, Westgate, Wakefield, £128.

OFFICIAL NOTIFICATIONS

Control of Chrome, Magnesite, Wolfram, Dolomite, and Foundry Bonding Materials.

The Minister of Supply has made the Control of Chrome, Magnesite and Wolfram (No. 2) Order and the Control of Foundry Bonding Materials (No. 1) Order, both of which came into force on July 30.

The Chrome, Magnesite and Wolfram (No. 2) Order makes subject to licence the acquisition and disposal of "basic or neutral refractory material," defined as including bricks, refractory cements and other refractory materials containing any compound of magnesium or chromium, other than those manufactured wholly from dolomite.

The Foundry Bonding Materials Order subjects to licence the acquisition and disposal of bentonite and colbond, and fullers' earth, except for the following uses (exempted under Direction No. 1 under the Order) : Dyeing and processing of textiles; oil purification, fat purification; paint and pigment industry; paper or board making; pharmaceutical preparations.

Copies of the Orders can be obtained from H.M. Stationery Office or through any bookseller.

In addition to the materials covered by these Orders, the Chrome Controller will in future be responsible for the production and distribution of dolomite with a view to ensuring adequate supplies and the most advantageous use of the material. It is not considered necessary at the present time to regulate the sales of dolomite by licence.

Any inquiries arising out of this notice should be addressed to the Chrome Ore, Magnesite and Wolfram Control, Ministry of Supply, Broadway-court, Broadway, London, S.W.1.

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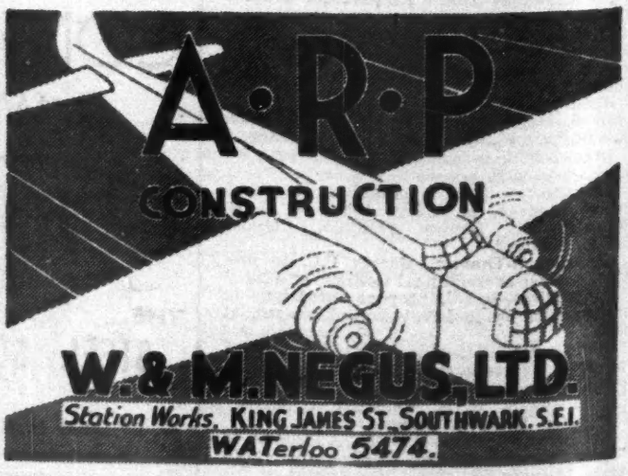
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